

THE  
**SOUTHERN AGRICULTURIST.**

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**PART I.**

**ORIGINAL COMMUNICATIONS.**

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*On the advantages of using Animal Power and Machinery  
in the Culture of Rice.*

Santee, 28th February, 1837.

*Mr. Editor,*—In a former communication, I proposed several plans for counterbalancing the loss sustained by rice-planters, from the departure of their operatives to the west, by the introduction of animal power and machinery. Several experiments have been tried, and laid aside, because less practicable, or inferior to the work performed by human power. The question for consideration, is now presented under a different aspect: it is not, whether the work can be best performed by a large number of hands without machinery, or a small number with machinery? but, whether the work of a rice-plantation can be performed at all, by the diminished number of laborers, without the aid of machinery, or throwing out of culture a portion of the land?

The rice-planter must decide, whether he will abandon the cultivation of part of his land, and adhere to the old system of planting 5 or 6 acres of rice to the hand, depending on the hoe alone for tillage; or, whether it is not worth the effort to introduce such a change of system as shall afford a prospect of equal crops with inferior human power. The instruments most essential to this change are, the plough and steam threshing-mill; the latter is in a train of successful experiment, one half of the straw furnishing sufficient fuel. With a pair of inferior oxen, and a light-bar share-plough, one hand can easily turn one acre of land per day; the cost of this operation would

be materially diminished, by ploughing with a single ox, and employing half-hands, boys or girls, to plough. Five ploughs, with five oxen, and as many half-hands, would thus do better work than twenty full-hands, in preparing the surface of the land; and leave the stronger hands to be employed on banks and ditches. More than half the labor of cleaning drains and ditches arises from the difficulty of throwing out the water, and the risk of injuring the ditches, prevents this operation from being performed in winter. A plantation carpenter can make a square pump, of boards, the inside four inches square, the boards to be well jointed, and kept tight, if necessary, by clamps with wooden wedges, the piston-rod much longer than the pump: the lower end to be placed in the ditch, and the upper end passing over the bank, on an inclined plane. The water is discharged across the bank, and the quantity being far greater than that thrown out by shovels, a large ditch is soon emptied, fewer bars are required, and the work of cleaning ditches can be performed in cold weather; thus enabling a planter, with few hands, and a threshing-mill, to commence putting his lands in order early in the winter.

After ploughing and harrowing all the fields capable of bearing the weight of an ox, the next operation is trenching. This is easily performed by the same animal that ploughs the land, with an instrument so simple, that a carpenter is not required to make it. A piece of poplar, or other light wood, six inches square, and seven feet long, with four pieces of oak, eighteen inches long, for trenching, the lower end flattened to whatever width is required for the trench, the upper end round, and two inches in diameter, to be driven into auger holes, of the same dimensions, in the beam, at the proper distances; two small short poles, for handles, and two, longer and stronger, for shafts, are let into the same beam, in the same manner. One of the outer trenches is run in the outer trench last made, three new trenches are thus opened at once. In land previously ploughed and harrowed, a mule can easily trench five acres per day; the trenches fifteen inches from centre to centre.

Covering rice by hand, is the only tedious operation in planting. After the beginning of April it can be covered by flowing the field, and keeping it under water until the rice comes up. Those who object to so long a soak-flow,

might run a harrow parallel to the rows, after soaking, to save the tedious operation of covering by hand; I believe this is the usual method of covering small grain, when the drill husbandry is used in England.

Hand-hoeing, the next operation in the usual mode of rice-culture, where none of the fields are kept entirely under water, is tedious, and renders it difficult to cultivate more than six acres to the hand. Rice, planted fifteen inches apart, has been ploughed successfully with a single flat trenching-plough, at the rate of three acres per day; if the trenches were made a few inches further apart, say seventeen or eighteen inches from centre to centre, and the rice sowed thicker in the trench, there can be no doubt of the advantageous use of the plough: two furrows of the narrow shovel or gaffer, when the rice is young and the land requires stirring, might then be run between the rows; when the rice is older, the same number, with the flat trenching-plough, which does not penetrate deep enough to disturb the roots, might be used. If the trenches were placed at unequal distances, say two rows twenty inches apart, and the next twelve or fifteen inches, the wide space might be ploughed, and the narrow one left for the hoe. This would prevent the roots of the rice from being cut on both sides by the plough, and the hand, hoeing the narrow row, could at the same time remove any clods left on the rice by the plough. The trampling of animals is ascertained not to injure rice before it joints. A wider space between the rows is here recommended, not because it will produce more rice, but because it will diminish the labor of trenching, sowing, covering, and tending, if the plough be used; and therefore increase the quantity of land that may be planted for each hand. Nine acres, producing 40 bushels per acre, is a better crop by 60 bushels, than 6 acres producing 50 bushels per acre.

The last operation is harvesting. The cradle has been tried, and failed, principally because it cuts the straw too low, increases its bulk, and the labor of threshing. Where the threshing-mill is used, this is not an important objection; and though it would increase the labor of bringing the rice out of the field, the longer straw enables the binders to tie larger sheaves, and thus expedite that part of the harvest. No one, however, can complain of the time employed in harvesting, as it proves the abundance

of a crop; and the increased quantity of straw, to those who plant provisions, and manure the high land, well repays the extra labor. On those plantations which are so situated, that neither flats nor wagons can be used to advantage in harvesting, recourse may be had to the Devonshire hook, made of four small branches of young trees, with part of the trunk, so placed on the back of a horse, mule, or ox, that it can be made to carry a large and heavy load. This has been tried with success.

Having thus briefly and imperfectly stated several methods of using animal power, and different implements of husbandry, in order to dispense with human labor, the price of which is every day appreciating; I shall conclude with some observations on the probable effect of diminishing the number of negroes employed in rice-culture. The different manner of carrying on work in the upper and lower country, is obvious to every planter of the sea-board who spends much time in the interior. There, from ten to forty acres of land are cultivated to the hand, with the assistance of ploughs, wagons, cradles, and other machinery. Fifteen to twenty acres of cotton and corn, and as many more in small grain, are not unusual. The negroes live better, and consequently work better, than those of the sea-board. They work nearly the whole day, and receive so much assistance from animal power, that their work is generally light, while those on the sea-board, working by tasks, which are frequently finished by one or two o'clock, have the rest of the day to themselves. Were they placed on a footing with the farm negroes, they would do more work for their owners, and receive more perquisites in return. If the number of negroes on rice-plantations was diminished, the stocks of cattle and hogs would be allowed to increase, and the owner would have it in his power to furnish his comparatively small force with the luxuries of milk and meat, in an inverse proportion to their numbers. The exchange of human for animals labor comprises much agricultural economy, in various ways. The first cost of a working negro, bought singly, is about twelve hundred dollars; the annual expense for food, clothes, taxes, medical attendance and medicine, houses, overseer's wages, &c., vary from twenty to fifty dollars, according to circumstances; much of this outlay being expended on those who do not work. The price of the best pair of oxen is about fifty dollars;



ploughs, harrows, and gear, ten or twenty more. The annual expense on this outlay of capital is nothing, the offal of the provision crop, or rice-flour, and straw, with the pasture of the woods, furnishing nearly all their food. By substituting this power for that of the negro, where practicable, there is a saving of more than nineteen twentieths of capital invested, and more than the same proportion of annual expenditure. Let us now take a comparative view of the work performed by these different powers. A yoke of oxen driven by one man, will plough one acre per day, the work of four hands, thus saving the labor of three hands. They will harrow three acres per day, thus saving the labor of five hands; if properly broke, they will trench four acres per day, thus saving the labor of four hands, allowing that two attendants will be required in this operation, one to lead the oxen in a straight line, the other to direct the trenching-plough. The advantages derived from their labor, in carting and wagoning, are not susceptible of comparative calculation.

Yours respectfully,

C. C. PINCKNEY.

P. S. Whilst on the subject of harvesting, I forgot to state, that, however doubtful the use of the cradle may be in rice, there is no doubt of its utility in harvesting oats and rye. Much time might be saved, at a very busy season, by using that instrument.

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*On the Cultivation of the Sea-Island or Long-Staple Cotton.*

*Mr. Editor,*—A writer in your last number, under the signature of O. P. Q., asks, how is it, that, we of the island manage to make such large crops of cotton, and what is our system of cultivation. Although this question has been repeatedly answered, in the pages of your journal, I shall, at the risk of being tedious, give my notions upon the subject of inquiry.

In cultivating the long staple cotton, the following items are to be considered :

I. Soil.

II. Manures.

III. Tillage.

I. The SOIL for the long staple cotton, should be judiciously selected. It may be laid down as a general rule, that a damp soil will never produce certain crops of this staple. A light, dry and loose soil, should, if possible, be chosen; the sub-soil of which should be of a sandy or gravelly nature. Such a soil will seldom need drains; though, in my opinion, the highest and dryest soil cannot be injured by draining.

Many lands in our State have a high, and apparently a dry soil; but then, the subsoil is clay, or a kind of cold quick-sand. Cotton can be produced on such lands; but extensive draining is absolutely necessary for these. After the soil has been considered, regard should be next had to the manures which are applied to it.

II. MANURES. Those manures which feed the plant, I term *nutritive* manures; while those which enable the plant to digest its food, I call *stimulants*.

I consider all putrescent animal and vegetable matter *nutritives*, while the mineral substances are classed among the *stimulants*.

Bearing these distinctions in mind, it must be determined, whether, the soil to be cultivated needs the one manure or the other.

If it produces plants which grow rank and vigorous, neither vegetable nor animal matter will be safe to apply. In such cases, *stimulants* might be applied with great success.

Salt-mud, salt-marsh, and even common salt, have been all applied by our sea-island planters, as the best stimulants. I do not know that *lime* has ever been applied. Salt-mud answers best where the land is sandy or light, but it answers also well upon land which is not too low. It is the practice with most planters, to get out their mud in hand-barrows, during the summer months, and leaving it in heaps, to be carried out upon the land when convenient. This is called applying the mud in its "*dried state*." I object, however, to this mode; because, I think that the mud, by being heaped up to dry, loses most of its saline qualities, by the rains falling upon it, &c. When the mud is taken immediately from the creek or pond, and placed upon the soil, it is called applying it in its "*green state*." It is then soft, and can in this state be spread out easily with a hoe, in the alleys. After being

thus spread out, it should be left a day or two to dry. The water will evaporate from the mud, and leave the salt, and vegetable matter of the mud behind. A cart-load of mud to each task-row, is the amount usually applied; but double, or treble the amount might be used, with great success. The mud should be placed under the first listing.

*Salt-marsh.* This manure I decidedly prefer for damp land. It may also be gathered in the summer, and put up in heaps, for use in the following spring. Where the planter alternates his fields, the marsh may be spread out in the alleys of the vacant field, and immediately listed in. This mode is decidedly preferable; because, putting in the marsh at so early a period, gives it abundant time to rot, by the ensuing spring. But where the same field is planted for any number of consecutive years, the marsh must be put up in heaps to rot during the summer; for the field is then occupied with the cotton. With a good scythe, it may be fairly estimated, that one fellow will do six times as much at cutting marsh, as in digging mud: and when it is considered that six cart-loads of marsh, will manure a task better than 21 loads of mud, the balance is greatly in favor of the marsh. Rushes do almost as well as the marsh, where the land does not require salt. But they may not be considered under the head of *stimulants*; while marsh acts both as a *stimulant* and a *nutrative*. Some planters object to marsh, and say that it produces "*blue*" in cotton; but no one need apprehend this, if the marsh has been put into the land so as to give it sufficient time to rot, before the cotton-plant reaches it.

A word about preparing marsh. Most planters pile it up in small stacks, for the purpose of tasking their negroes while cutting it. This is attended with the following evils. It permits the sun to act so powerfully upon it, as to dry it completely; the rains then wash the salt away; and when the marsh is taken out it is not at all rotted. To obviate these evils, the marsh should, if possible, be all heaped up in one pile. The pile should be made square: and the more the marsh is trampled down, the sooner it will rot, and the less apt will it be to throw away its saline properties. Experience has taught me, that three cart-loads of marsh, treated in this manner, will go as far as six treated after the common mode.

*Salt.* As regards the properties and application of this stimulant, I refer O. P. Q. to the valuable article from your pen, Mr. Editor, contained in the January number of your journal.

**III. TILLAGE.** Under this head I shall consider, in order, Listing the land, Bedding, Planting, Hoeing, Thinning, &c.

If possible, cotton-land should always be listed in the fall. By doing so, at this season of the year, the grass generally becomes killed by the severe frosts of winter, and the soil becomes thereby improved. If, however, the land is much infested with grass, it is decidedly best to leave it for working as late in the season as possible, because then, the grass has less time to overtake the cotton. In all cases, I prefer putting the manure under the list, because the plants then receive nutriment when they most need it, viz., when they have attained some height.

From *listing*, I next proceed to *bedding*, which requires more attention than planters are generally in the habit of paying it. The size and formation of cotton beds are of great importance. In forming a cotton-bed, the base of the bed should be made so broad as to leave the alley as narrow as possible. The more narrow the alley, the better will the water lead off after a rain. The beds on high land need not be made high, but rather broad and flat; and I am not altogether convinced, but that the same shape would suit best for low lands also. The reason generally assigned for making flat beds is, that they are not so apt to be washed away by rains; and, in hoeing them, the beds are not cut down too much.

*Planting.*—Hitherto, planters have been anxious to have their seed in the ground by the 25th of March, and from thence to the middle of April. For myself, I prefer early planting. Though after the cotton has come up, it may be put back by cold, it will be, nevertheless, more forward than cotton which has come up later; and though it should be entirely killed, it is better, in my opinion, to run the risk of planting over, and having early cotton, than, by planting late, to have the pods destroyed by an autumn frost.

The best plan is, to plant the entire cotton-crop before the corn-crop is put into the ground. Next, after the



cotton-crop has been put in, the corn should be immediately planted, and after the corn has been planted, the first cotton should be hoed, whether there is grass or not. This forms the first hoeing. Mr. Townsend, of Wadmalaw Island, has introduced a skimmer-plough, for hoeing the bed at this, and subsequent stages of the growth of cotton. I have never used the plough myself, but I have seen it work to such advantage, as to be convinced of its utility. It is a plough, with a long sword upon one side, which shaves the sides of the bed, and can be had at Mr. Martin's blacksmith-shop, Wentworth-street, Charleston. As I have said, this plough shaves the sides of the bed, and one ploughman and a hand, can with ease go over four acres per day. The tops of the beds, near the cotton, are left untouched. This the negroes attend to with the hoe. One acre is given to each, and their work now is, to hoe what the plough has left untouched, to pick the grass from the bed, and to loosen with their fingers the earth around the young plants. Those who use this plough, plant more largely to the hand than those who use the hoe; but I shall not do so, though I shall use it. This plough may be used in hoeing grass, until the cotton grows so high as to render it unsafe to use it longer.

Where this plough is not used, the first hoeing of cotton consists, in each hand hoeing, as soon after the cotton is up as possible, the sides of the beds. A chop or two should be given, on each side of the plants, with the hoe, but great care must be taken that the plant is not bruised. After this, all grass, if there be any, must be removed from the plant, and the earth loosened about it.

*Second working.*—After the first hoeing has been completed, the second working should commence. This consists in going over the field, and hauling up the earth around the plants, which has been thrown from it at the first working. Between the first and second working, some grass may have grown around the plants; this should first be removed by the hand, and the cotton-plants in each hill should be thinned down to four, five, or six, according to their strength of growth. This second working gives the plants a start, which will enable them to be left to themselves until the corn-crop has been attended to. The corn-crop having been attended to, the third working of the cotton should now commence.

*Third Working.*—This is done like the second, and the plants should be thinned down to two or three, as circumstances require.

*Fourth Working*—is, with many planters, the last. The plants are now thinned down, according the nature of the land. If it be very strong, and the cotton grows high and thick, 60 stalks should be left in each task (105 feet) row. In a word, the best mode for thinning is, to leave the stalks so wide apart, as to calculate upon a free circulation of air around them. I am decidedly opposed to *thinning out* the plants after the field has been in blossom. The plants are then so high, and their roots so large, that the removal of any of them from the bed must disturb those that remain. When removal is required, I prefer cutting those to be removed, close to the roots with a knife. This can be as easily done as pulling them out, and it is much the best for the remaining plants.

It will be perceived, that in making provision for the treatment of my cotton and corn, I have said nothing about potatoes. These I always cultivate with two or three old hands, whose sole business it is to attend to them. My cotton and corn are thus not interfered with.

I have written this article in great haste, Mr. Editor, but I send it to you as it stands, in order that it may reach O. P. Q. in time.

ST. HELENA.

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*Hilling Corn.*

Barnwell, March, 1837.

*Mr. Editor,*—It is a practice with most planters, in the lower district of our State, to hill their corn. Now, sir, I cannot see the use of this plan. Is it to prevent the corn, as some pretend, from falling down? This can scarcely be the case; because every one must know, that if the corn has not sufficient root to support it in the ground, all the earth which you may throw around it, will not keep it from falling. My experience, Mr. Editor, has taught me, that wherever the land is well drained—and good draining is as necessary for corn as for cotton—I say, sir, wherever the land is well drained, hills are of no service to the corn. When they are made, they only enable the sun to have greater power over them,

and thus the soil about the corn is suddenly dried up; and in case of rain, and a sudden coming out of the sun, the corn is very apt to be scorched.

But, Mr. Editor, while I object to the mode of hilling corn, I ought to suggest some better plan in its stead.

In the first place, then, as early in the fall as possible, I plough up my corn land, so as to turn the whole of it up to be operated on by the winter frosts, &c. In this state I leave it, until I am ready to plant in the spring. When ready to plant, I then drill off the land, with a bull-tongue plough, in drills five feet apart; and these drills I cross, again, at four feet apart. At each angle, I place my corn, and cover it with a common cover board. I leave two stalks in each hill, or at each angle. As soon as the corn is up, I give the land another ploughing with the bull-tongue plough, ploughing up to the young corn each way; and as soon as this is done, I commence running the cultivator down the alleys, to destroy the grass; and if the plants need it, I now hoe around them, and thin them down to the amount required. By the use of the cultivator, the earth is kept free of grass, and by being loosened, the roots have a free chance of running out in all directions for food. I have no hill about the plants, they stand well, and bear about as well, if not better, than the common mode of hilling. The manure is put around the corn after it has been up, and is ploughed upon at the second ploughing.

#### ARATOR.

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#### *Remarks by the Editor.*

We willingly give place to the communication of "Arator;" but at the same time we deem it necessary to make a few comments upon the same. He objects to the mode of planting corn in the low country, by hilling, and states that where the land is well drained, that such a plan is useless. The mode he suggests, as a substitute, may answer very well, when applied to the soil of Barnwell District, which, for the most part, is sandy; but experience, we think, has long since taught the planters of the sea-shore, that corn, like cotton, can scarce have too large a bed to nourish it. "Arator" is very much mistaken when he supposes, that the plants are more apt to scorch when they are hilled, than when suffered to grow

upon a flat, level surface. The truth is just the *other way*. Where corn has been *bedded* or *hilled*, the water, after a severe rain, is much more apt to run off, than where it is suffered to remain upon a level surface. In this last situation, if a hot sun come out upon it, a *schorching* of the plants will almost inevitably ensue. We think that "Arator's" error consists in applying a system, which may do well in Barnwell, to a portion of our country, which is entirely dissimilar, in soil, to that district. We would respectfully call his attention to one other particular, which it would have been well for him to have considered. The adoption of his mode of cultivation promises little, if any, saving of labor, over that pursued by the planters of the sea-shore districts. Most of them hill, in a great measure, with the plough; and if we are not greatly mistaken, they do as much work with a like force, as "Arator" promises to do. Every improvement introduced into husbandry, must possess the following essentials to recommend it:

I. It must save labor.

II. Save time.

III. And yield an equal, if not a greater product.

These considerations should enter into every agricultural experiment; and we suggest them to our correspondents as heads which might enter into all communications for our journal.

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### *Salt Mountain in the West.*

Salt has been truly classed among the necessities of life. Its consumption enters into a thousand different manufactures; and it is now becoming as useful an article for the good husbandry of the farmer, as it is for his wholesome living. Tea, sugar, coffee, dried fruits, and spices, come to us free of duty. Yet these are among the luxuries of life: while salt, which may be considered as one of the necessities of life, pays a duty of ten cents per bushel. This should not be the case. For our part, we would like to live as nearly without taxation as possible. But if any thing is to be taxed, we think it at least the best policy, to tax those articles which can be most easily dispensed with. However, we shall not discuss this matter



at present. We perceive that our citizens of the West are likely, in a short time, to supply themselves with salt at their own doors. A salt mountain has been actually discovered in the west ; in speaking of which, one of our exchange journals uses the following language :

“ We remember the time when Mr. Jefferson’s assertion of the existence of a mountain of rock salt in the newly acquired territory of Louisiana, furnished abundant matter of mirth to those who disapproved of the purchase by that statesman, of the immense region west of the Mississippi. Examination has shown that Jefferson was right ; some of the government exploring parties, in their visits to the Camanches and Caddoes on the head of the Red-river, found that one of the branches of that river flows for a considerable distance, between lofty and precipitous banks of pure rock salt. Rock salt has not hitherto been known to exist in the State of Missouri, but it appears that this indispensable article is about to be added to the inexhaustible quantity of mineral riches that state already possesses, in her coal, iron and lead mines. At the saline reservation on Salt-river, now owned by Dr. Ely, and one or two other gentlemen, an Artesian well, for the purpose of procuring salt water, has been sunk to the depth of 300 feet. For *sixty feet of this distance, the augur passed through solid rock salt.* Here is a supply for the immense population destined at no great distance of time, to throng the valley of the father of rivers.”

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*The Cotton Manufacture of Great Britain systematically investigated, with an introductory view of its comparative state in Foreign Countries, drawn chiefly from personal survey ; by ANDREW URE, M. D., F. R. S.*

We have just risen from the perusal of this work, after great interest and improvement to ourselves. It should be in the hands of every one who wishes to learn the true history of the cotton manufacture—a manufacture, the protection of which, has become the prime policy of most of the states of Europe, and this country.

To the work before us, Dr. Ure has added a history of the culture and husbandry of the cotton-plant, as carried on in those countries where it has been cultivated. The materials are drawn from the evidence of planters themselves; and from them we obtain the congratulatory intelligence, that, in point of culture, preparation and staple, the American cottons stand at the head of all others in the European markets. "The following," says Dr. Ure, "are the commercial characters of the different kinds of cotton wool imported into our market.

1. *American Cottons.*

*Georgia Sea-island.*—This is raised on the sea coast of Georgia and the small islands which form the neighbouring Archipelago. Though not decidedly yellow, it has somewhat of a dull butter tint, which distinguishes it from white cotton. It is remarkable for its long staple, the filaments being three times longer than those of the Indian cotton wool. It has a silky softness. It is sometimes dirty, but the well-cleaned and the best, is preferred to every other quality, for spinning fine yarn; and indeed it is indispensable for the finest. The reason of this superiority appears to be the cylindrico-spiral form, and equability of its filaments, which facilitates their torsion into a uniform thread.

*Georgia Upland.*—This cotton grows in the interior of the country, as its name denotes, and though far inferior to the preceding, it is a valuable wool for coarse yarns. It is white, occasionally dirty, of a short unequal staple, light and weak. It was long called Bowed, because it was originally cleared from its seeds by the blows of a bow-string, a most fatiguing operation, which Whitney's saw-gin has superseded.

*Tennessee.*—Resembles the last sort, but is generally cleaner and better.

*New-Orleans.*—Like the last two, but somewhat superior.

*Pernambuco.*—Has a fine long staple, clean and uniform. It is much used by the hosiers.

*Maranham.*—This not quite so good a staple as the last, nor so well cleaned; it holds the same rank as the Demerara cotton.

*Bahia.*—Slightly superior to Maranham.

*Surinam*.—A long stapled cotton, a faint yellow tinge, but a clean cotton; in request for hosiery.

*Demerara*.—This is a fine white glossy wool, generally very well cleaned, and picked before packing. It spins into a clean stout yarn, and has now risen to a level, at least, with the Pernambuco.

*Berbice*.—Like Demerara.

*Egypt*.—This cotton has been much improved, in the course of some years, by the enlightened policy of the Pasha. He imported seeds from Cyprus, Smyrna, Brazil, Georgia, and other countries, and has produced a cotton which comes near the Sea-island. It is seldom well cleaned.

*West Indian*.—In the Bahamas a tolerably good cotton has been grown from the Bourbon seed, though much inferior to the Bourbon itself. The staple is fine and silky, but the cotton is not well cleaned.

*Barbadoes*.—This is of middling quality; staple rather short, but silky and strong. It contains too much of the seed husk.

#### *East India Cottons.*

*Bourbon*.—This is the most useful of the oriental sorts. It is clean, and has a fine silky staple. It ranks next in value to Sea-island, but is not now imported into our markets.

*Surat*.—This cotton has an exceedingly short fibre, is dirty, being often mixed with leaves and sand.

*Madras and Bengal*.—These are much the same as the preceding sort. Some of the Madras cotton has been raised from Bourbon seed, but, from inferiority of soil and culture, it is little better than the common Indian cotton, which is the product of the *gossypium herbaceum*. These cottons can be spun into fine yarn only by the delicate fingers of the Hindoo female."

"The following are the most common distinctions of cotton recognized on the continent of Europe: 1, the North American; 2, the West Indian; 3, the South American; 4, the East Indian; 5, the Levantine; 6, the African; 7, the Italian; 8, the Spanish.

1. Among the cottons of North America, or the United States, are to be noted that of Georgia, short and long stapled, Louisiana, New-Orleans, Carolina, and Tenes-

see. The short stapled Georgia is worked up chiefly into the coarser yarns of No. 30 and under, but when mixed up with the Egyptian Mako, it may be spun up to No. 40. The bluish-white cotton of Louisiana is of a better quality, but ranks below the long stapled Georgian, the Brazilian, and certain of the West Indian cottons. It is fit for spinning, as high as No. 50, but is sometimes deteriorated by a number of little seeds left in it by imperfect ginning. The Carolina is also preferred to the Upland Georgia, as well as the cotton of Tennessee and New-Orleans, which are often weak-fibred; yet some of the latter are fine enough to spin yarns as high as 100.

2. The West Indian cotton wools of the best sorts resemble in length of staple the Sea-island, the Bourbon, the superior Spanish, and the South American. That of Porto Rico is held to be the best; after which come the others in the following order nearly: Curaçao, St. Domingo, Martinique, Guadaloupe, Barbadoes, Jamaica, St. Christopher, St. Lucie, St. Thomas, Grenada, St. Vincent, Dominica, Tortola, Montserrat, Bahama, Cuba, St. Jago, Antigua. The last may rank with the best of the Levant cottons. Of the West India cottons it should be remarked, that their cultivation has been much neglected of late years, since sugar came so much into play; and that their qualities do not correspond with the above, which is their ancient and natural order. The Guadaloupe has often a reddish tinge, has a long staple, and is easy to spin. It, and the best of the St. Domingo wool, will furnish yarn as high as 100 in number.

3. South America is capable of affording excellent cotton wool, of which the best example is the Brazilian called Maragnan, Bahia, and Pernambuco, which have sometimes been made into yarn as fine as No. 200, and upwards. They deserve to be placed immediately after the Sea-Island Georgian and the Bourbon, although the Maragnan is often ill cleaned. The Minas-Geraes, the Para, the Ceara are of inferior quality, and are rarely spun into finer yarn than No. 60. The Rio Janeiro is a slight, dirty, and dingy kind of cotton wool, upon a par with the worst sorts of the West Indian. Among the remaining varieties of South American, the Cayenne is most esteemed, on account of the length, whiteness, and lustre of its filaments, and it may be classed with good Brazilian. After it, comes the Surinam, with long yel-



lowish staple, which has been occasionally spun into No. 200; those of Demerara, Essequibo, and Berbice are generally inferior, as well as of Lima, the Curaçaos, and Guiana. The Carthegena is coarser and dirtier than the preceding, but has greater length and strength of staple.

4. The East India cotton wool is, generally speaking, inferior to the American, and even to the better sorts of the Levant cottons. The Surat, which is the most abundant, is ill cleaned, yellowish, tolerably fine, but very short in the staple. The Madras, Siam, and Bengal are of very variable quality. The last is white, silky, and has sometimes been spun into No. 50. The Nanking cotton was at one time celebrated, but it is now little known in Europe.

5. Under the Levant cotton wools are comprehended all those grown in European and Asiatic Turkey; such as that of Macedonia, of Smyrna, and the Levant properly so called—all of which are distinguished by considerable whiteness, but have a moderate length of staple, so that they can rarely afford yarn finer than No. 60. The best kinds of the Macedonian cotton are the Uschur or the Zehent wool, and the Salonichi; Cira wool is a very poor article, not workable into finer yarn than No. 20. A great variety of cottons come into the market under the name of Smyrna, because this is the general shipping port for most of the cottons of Turkey in Asia. They are perhaps inferior to the best Macedonian and East Indian, and furnish chiefly coarse weft yarns, and candle wicks. The best varieties are the Arar, Kassabar, and Kirkadadoch. The most highly esteemed sorts are the Subuschat and Kinik; those of Cyprus and Acre are inferior; the worst are those of Bender and Altah.

6. Africa furnishes from the isle of Bourbon the best species of cotton wool, almost as much prized as the finest Sea-island, but it suffers a greater waste in the manufacture. It is uniform, clean, fine, and silky, rivalling the Levant in whiteness; it may be spun into the finest yarn. The Egyptian or the Alexandrian cotton wool, known in commerce under the name of Mako or Maho, has a fine readily twisting filament, admits of being mixed with other kinds of cotton wool, but is often foul and interspersed with unripe fibres. It has of late years quite supplanted the Macedonian in the cotton manufac-

tures of Austria. The Senegal cotton ranks with the middling cottons of the West Indies, and with good Levants.

7. The principal cottons, known in trade under the title of Italian, are grown in Malta, Sicily and Naples, the Sicilian being the best; the next are the cottons of Castelmare and Della Torre in the neighborhood of Naples, which approach in quality to the cotton of Louisiana. The Malta cotton ranks with the inferior West Indian. The Biancavilla, a variety of Neapolitan cotton, suits well for mixing with the Mako, and then affords (in the proportion of three to two of Mako) a good yarn of from 30 to 50 in fineness of number. Mixed with Upland Georgia it is spun into Nos. 30 and 40.

8. The best kind of Spanish cotton wool is the Motril, from the kingdom of Granada, which deserves to be placed immediately next to the first Brazilian. From the fineness of its staple it may be spun into yarns of a high number."

In the work before us, is an admirable account of the mode of cultivating the Upland and Sea-island cottons, digested from communications from the Hon. White-marsh B. Seabrook of Edisto Island, and Thomas Spalding, Esq. of Georgia.

We shall return at another time to the notice of Dr. Ure's work; meanwhile we recommend it to the careful perusal of the public.

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*Preservation of Corn and other grain against the ravages of crows, blackbirds, &c.*

*Mr. Editor,*—As the cold of winter is now being chased away—the beauties of spring ushered in by the music of birds—and the season of planting at hand—a friend of yours has politely requested me to make the following communication.

Having some knowledge of agriculture, and possessing some experience in the cultivation of maize or Indian corn, and especially in a mode of protecting corn and other grain from the depredation of birds in the spring of the year, in a less troublesome and expensive way than that usually had recourse to, by planters in this section

of the country—it has been thought desirable that the simple but effectual method referred to (not generally known to your readers) should no longer be floating about in vague uncertainty, but that the important facts should be put on record, in the pages of the Agriculturist, that the same may be placed within the reach of every individual, and if approved by the public, become the subject of general adoption—so that what is now known and practised by few, should constitute the practice of every planter.

Under the old method, the loss of time in *mind*ing the corn field, as it is called, is immense. According to that system, one individual (either a whole or less than a whole hand) to every seven acres is supposed to be necessary to *mind* the field—and hands are usually posted about a corn field in this proportion, some with guns and some without, from sunrise to sunset, for a period of at least three or four weeks, to protect the corn from the hungry maws of the feathered tribe.

The late Mr. Thomas Smith of Stono, a gentleman distinguished for his original thought as well as practical good sense and judgment, perceiving the great evil arising from the depredations of birds upon his young corn, and the scarcely less evil of drawing off from other important duty, at a very busy season of the year too, so many of his hands for its protection—set himself at work to discover a remedy. However disappointed expectation may have been in the various decoctions which have been recommended for this purpose—the result of his inquiry was—that, the application of tar and soot, to seed corn, effectually protects it against the ravages of crows and other birds.

The method which I have adopted for several years past, and I believe it is similar to that practised by Mr. Smith, is, to have a large iron pot or kettle, with one and a half or three pints of tar, according to the size of the vessel, placed over a moderate fire, and when heated to a temperature something above blood heat, not however exceeding 150° of Farenheit, add half a bushel or a bushel of corn, and stir it rapidly until it is completely enveloped in the tar, then add soot collected from chimnies, as long as it will adhere, continuing the stirring all the while with a wooden spatula. When the corn is removed from the vessel, it is found to have gained about

fifty per cent. in bulk, and is sufficiently dry to admit of being conveniently handled by the planter.

The proportion of tar is three pints, and the proportion of soot usually taken up, is about half a bushel, to each bushel of corn.

This process retards vegetation a little, but does not destroy it. When the corn comes up, the birds are instinctively attracted, and attack it as usual—but after pulling up a few hills, finding it too bitter for their sensitive palates, they abandon it in disgust.

Ascertaining by experience, that this process was an effectual protection to corn, and of course a great saving of time and labor—reasoning from these facts, I was induced to try the experiment in regard to rice, and have found the same process equally successful in the dry culture of rice, and from analogy, an effectual protection to other small grain.

J. B. W.

*Charleston, S. C., March 20th, 1837.*

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### *Cultivation of Flowers.*

*Mr. Editor,*—The department of Flora in cultivating the productions of the earth, I conceive to derive much interest when under the care and direction of the ladies. I know nothing more agreeable and charming to the sight, than that presented by the fair hands of the better part of creation, busily and tenderly employed in raising and sustaining the drooping flower, crushed perhaps by its own loveliness, and giving it health and vigor, by her delicate care. It has been a matter of some surprise to me, that this subject has not been thought of sufficient importance to some of your correspondents, to attract their attention, and although the primary object of your very useful publication is well attained, by the valuable topics it discusses; yet I think humble Flora, should come in for a small share, and whilst we are initiated in the art of cultivating the great staple commodities of our country, the ladies should be initiated in the delicate and beautiful art of cutting the rose and tulip. The useful and ornamental would thus flourish, and where one rose grew before, two could be made to display their loveli-



ness to the sun. Although in our community, there are many of both sexes, who devote themselves to the interesting subject I am bringing to your view, yet it is not sufficiently general to be remarkable—it does not appear to me, that sufficient attention is bestowed upon our Flower Gardens, as regards their neatness and arrangement, that ought to be. Plants are crowded together without judgment or taste, and devotion is bestowed upon strangers without reference to beauty, merely because they are exotics, whilst the humble and retiring ornaments of our forests are permitted to “waste their sweetness on the desert air.” I would have them of every clime, and pride myself more upon their beauty, than their number. As I am excessively fond of every thing appertaining to a flower garden, I shall occasionally furnish your fair readers with such practical remarks, as my experience and observation may enable me. I have long remarked how much our delightful Spring rose is neglected, they are rarely to be met with in our city, and what are seen, can bear no comparison with those that flourished here in “olden times,” evidently exhibiting defective cultivation. In order to remedy this, and commence with a subject, I shall occasionally pursue, I would call the attention of Florists, to the following directions, to improve the cultivation of the Spring rose.

Roses of all descriptions thrive best in light and sandy soil. Hard or clayey ground is fatal to them—the culture of all roses is pretty much the same. In the months of September or October, they must be cut down near the ground, leaving one or two eyes, as may be desired, this will produce very early shoots in the spring; care must be taken to protect these from the frost and cold winds, that frequently occur at that season. At the end of April, these new shoots must be shortened to the eye near the main stalk—after every flowering, the branch which bore the flower, must be cut, above the eye nearest the end—it is thus they are made to flower frequently. The roots should be manured. The French pursue this method, and hence it is, that the gardens of Paris, can display the finest and most perfect roses in Europe.

REUBEN.

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*Tomatoes—their cultivation, and medicinal qualities.*

*Mr. Editor,*—In my estimate of this valuable vegetable I may, no doubt, be called an enthusiast. But, sir, I hope, what I shall say, in regard to the plant, may have a tendency to bring the attention of farmers to its more extensive cultivation.

This is now the proper season for planting them. If the seed has not been planted before, they may be now planted in the following manner. Sow the seed very thin, in drills well manured, and well pulverised. When large enough to transplant, make hills about four feet apart each way, and manure them well. In each hill set one or two plants, and as early after the plants take as possible, place sticks or bushes near them to run upon, like peas.

To have them late in the fall, sow seed in May, and set out the young plants when large enough, as described above.

It is not generally known, that this vegetable when just ripening, makes pies or tarts, of the most exquisite flavor. But it is to their medicinal qualities, I would particularly call the attention of your readers. In speaking upon this head, Dr. Cook, observes: "Of the hygienic, or healthful properties of the tomato, Prof. Rafinesque says,—"It is everywhere deemed a very healthy vegetable, and an invaluable article for food."

Prof. Dickson writes,—"I think it more wholesome than any other acid sauce."

Robley Dunglison, M. D., late Professor in the University of Virginia, and now of the University of Maryland, says,—"It may be looked upon as one of the most wholesome and valuable esculents that belong to the vegetable kingdom."

Many other like authorities might be quoted in proof of its hygienic powers, but I consider it unnecessary; I will only add that I am led to wonder at the folly and infatuation of many of my professional brethren, in carrying forward the sword of devastation against the health and happiness of the human family, in the support of deleterious substances, to the utter exclusion of this article, whose salutary and benign influences upon all who use it, are so apparent and perspicuous that the most ordinary

observer can but appreciate them, as well as the most scientific practitioner of the healing art ; but I choose to tread the rugged path of duty in placing its virtues before an intellectual and reading community—my fellow citizens. For acts of this kind, according to Virgil, we may even claim the best delights of Elysium ; for he says they “were showered upon those who received wounds for their country, who lived unspotted priests, who uttered verses worthy of Apollo, or who, like Very, consecrated their lives to the useful arts.”

Mr. Thomas writes me—“I have no positive evidence within my own experience of its medical properties, though the sauce is very grateful to persons recovering from fever. The late Doctor H. G. Spofford says,—‘I often find myself incommode and my health impaired by inaction of the stomach and bowels. This is always in some degree accompanied with a sense of straitness of the chest ; and besides a general uneasiness and lassitude, with head-ache and some degree of pain in the region of the liver. The appetite becomes imperfect, with a peculiar taste of the mouth as if something was wanting. The tomato at once removes the taste of the mouth ; in a little time quickens the action of the liver and bowels, and removes all those symptoms and feelings. It seems to me that of all articles of diet or medicine that have come to my knowledge, the tomato acts most directly upon the liver. Several other persons of my acquaintance have derived similar benefits from its use. It has saved me from the necessity of using cathartics.”

Prof. Rafinesque says,—“As a medical article for the liver, etc., it is a new fact, unknown even in Europe and India.”

The Indians use it as a diuretic, and to expel concretions from the kidneys. E. B. Barton, M. D., Professor of the Medical College of Louisiana, writes me under date—

*New Orleans, November 28, 1835.*

“I have read your publication on this subject (the tomato) with great interest, and if subsequent experience shall sustain your position of its having a specific influence on the liver and being a substitute for calomel, you will confer lasting benefit upon your country, and erect

an enduring monument to your own reputation. In it I most cordially wish you success, both as a philanthropist and an American—and I feelingly do it after having, for sixteen years, witnessed the horrible ravages committed by calomel.”

I have used with decided advantage in a variety of complaints, and hope to be able to exhibit its remedial powers in so lucid a manner that all attempts at refutation will prove illusory and vapid. I shall consider its medicinal agency as applicable to special cases under separate heads.

#### *Dyspepsia (Indigestion.)*

In a public lecture, introductory to my course in the Willoughby University of Lake Erie, in the fall of 1834, I stated that the tomato, when used as an article of diet, was almost a sovereign remedy for dyspepsia or indigestion: and from subsequent experience I am more fully confirmed in the opinion. The tomato effects a cure in dyspeptic cases—

1st. By its power of solution. Since my appointment in the University of Bellevue Hospital, I have received testimony of an indubitable character, that the tomato possesses, in an eminent degree, the power of dissolving the food in the stomach, and thus supplying the place of the gastric juice, when there is a deficiency in the secretion of that fluid, (and there usually is in such cases,) either in quality or quantity; and that is, undoubtedly, out of the body, in the same temperature, a most powerful solvent.—*Dr. Cook's Treatise.*

These vegetables may be preserved, throughout the entire year, by putting them up in dry sand, or rice chaff. Or they may be kept well, by putting them up in stone jars, and covering them with a strong pickle of salt and water. Just before using them, soak them an hour or so in fresh water.

CHARLESTON NECK.

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## PART II.

### SELECTIONS.

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#### *Process of Making Beet-Sugar.*

[FROM THE SILK CULTURIST.]

THE attention of the public having been some time drawn to the manufacture of sugar from the beet, and having repeatedly recommended its cultivation to farmers, as a profitable crop, we have felt ourselves under an obligation to give them the details of the process by which it is extracted. We have, therefore, examined the best authorities on the subject, and consulted several gentlemen, of some practical knowledge and experience in the business, and the result of our investigation is, that the process is altogether more simple, and less expensive than has generally been supposed. In describing the various processes in the manufacture, we have carefully avoided the use of chemical terms, and substituted language which we hope will be understood by every reader.

There are several varieties of the beet which yield sugar; but the Silesian beet is recommended as the best and most productive. This beet will come to maturity in all parts of the United States, up to the 45th degree of latitude. The soil most congenial to its growth, is a light sandy loam, of good depth, and if free from stones the better. Probably no country in the world is better adapted to the growth of this root than the alluvial meadows on the Connecticut and other rivers of New-England. The cultivation, however, need not be confined to valleys, as in most of the hill towns, lands may be found well adapted to its growth. The land is prepared for the seed by deep ploughing, and pulverizing the surface. This is best accomplished by ploughing in the fall, and leaving the land in furrows through the winter. In the spring, the land should be cross-ploughed and harrowed, and, if the soil be light, it will be prepared to receive the seed. The seed may be sown as early as the season will admit, broad cast, or in drills; but ultimately the plants should be from 12 to 18 inches apart. They should be hoed, and kept free of weeds; at the second hoeing they should be thinned out, and but one plant left in the hill—the surplus plants may be transplanted to vacant places in the field.

In the extraction of the sugar, the beets must first be cleansed by washing, or scraping with a knife, and care be taken that all decayed parts be cut off. They must then be passed through the rasper, and be reduced to a pulp; the finer they are rasped, the better, as it facilitates expressing the juice. The pulp must then be put into cloth bags, and have the juice pressed out by a screw-press. In France they use the

hydraulic press; but a cider, or other press, will answer the purpose, and be attended with much less expense. As decomposition commences soon after the beet is out of the ground, and progresses rapidly, no time should be lost in converting it into sugar.

After the juice is expressed, and before it is converted into sugar, it must undergo four distinct and different processes. 1. Defecation. 2. Evaporation. 3. Clarification. 4. Concentration.

#### *Defecation.*

The composition of the beet-juice does not differ essentially from that of the cane—it combines with the saccharine matter, small quantities of malic or acetic acid, wax and mucilage, which must be extracted before evaporation is commenced. The first process, therefore, is to purify the juice, which must be done by neutralizing the acid, decomposing the wax, and coagulating the mucilage, and hence is called defecation. All this may be done by heating, and mixing with it the milk of lime, in about the proportion of 46 grains, troy weight, to the gallon. The milk of lime is prepared by slaking quick-lime with hot water, and reducing it to the consistence of cream. The juice must be heated to about 160 degrees Fahrenheit, and the milk of lime poured into it, and thoroughly mixed by stirring with a stick. After it is intimately mixed, the stirring must be stopped, and the mixture suffered to rest for a short time. It must then be heated to the boiling point, which will throw the impurities upon the surface, in the form of scum, when the boiling must be stopped. When the juice has become clear, it must be drawn off from below, by means of a cock, or the scum must be skimmed off from the top—care being taken, in either case, to effect a complete separation.

#### *Evaporation.*

The next process in the manufacture, is to dissipate the water, which is done by “boiling away,” as it is commonly called, but in technical language, evaporation. If in the progress of defecation, an excess of lime has been used, it should be extracted. This may be done by a mixture of sulphuric acid and water, in the proportion of one of the former to forty-four of the latter. This mixture, put in contact with the lime, causes an effervescence, by which the lime is thrown off, and the cessation of which is a sure evidence that the lime is neutralized. Some manufacturers say, that a small portion of lime should be allowed to remain, and others, that the whole should be neutralized. As practical men differ on this point, we may safely conclude it is not very material.

The juice is boiled down till it is reduced to about one fifth or one sixth of its original quantity. For this purpose pans or kettles may be used; but it will be seen that those vessels which present the greatest surface to the fire, and give the least depth to the juice, will best facilitate evaporation. As the water evaporates, flaky substances will separate from the juice and collect in a white foam on the surface, which must be skimmed off as it appears. To promote their separation, the boiling is commenced with a moderate fire, which is subsequently increased as they disappear. Sometimes the white of eggs beaten, or a little blood, is added for the same purpose. During the boiling, the juice will rise in froth, and flow over the top of the pan, unless prevented by occasionally throwing in a small quantity of some fatty substance. Butter is commonly used, but tallow, lard, &c. will

answer the same purpose. It not only causes an immediate subsidence, but hastens evaporation.

*Clarification.*

After being defecated and evaporated, the juice is yet in a degree impure, and the object of the next process is to separate it from its remaining impurities, and hence it is called clarification. This consists in filtering it through animal charcoal granulated [burnt bones broken to grains], and is performed in the following manner. Tubs, or vats, in the form of those used for leaching ashes, are made of wood or metal, and furnished with a cock, inserted near the bottom. The size of the vats is immaterial; but those of the following dimensions will be found most convenient: 2 feet 8 inches deep; 1 foot 8 inches in diameter at the top, and 11 inches at the bottom. They may be four-sided or round; but those made of staves and hooped with iron hoops, we should think the cheapest, and on some accounts the best.

A strainer, standing on legs, and covered with coarse cloth, must first be placed in the bottom of the vat, and filled with the charcoal; about 100 pounds will be necessary for a vat of the above dimensions. The charcoal must then be covered with another strainer and cloth, and the vat filled with evaporated juice, or, as it is then called sirup. After standing long enough to leach through the charcoal, the cock must be turned, and the sirup be slowly drawn off, and the vat refilled as fast as it is emptied. The charcoal must be changed twice a day; but it may be washed and reburnt, and, thus prepared, it will answer for another filtration. This may be repeated until it is consumed.

*Concentration.*

The next process is to solidify the sirup, and hence it is called concentration. To accomplish this, it must be again evaporated, until it is brought into a proper state for chrySTALLIZATION. As it is important that evaporation should cease as soon as it arrives at this point, Chap-tal gives the following rules for ascertaining the fact. "1. Plunge a skimmer into the boiling sirup, and, upon withdrawing it pass the thumb of the right hand over its surface; hold the sirup which adheres to the thumb, between that and the fore-finger, till the temperature be the same as that of the skin—then separate the thumb and finger suddenly—if the boiling be not completed, no thread will be formed between the two; if there be a filament, the boiling is well advanced; and the process is completed as soon after as the filament breaks short, and the upper part, having the semi-transparency of horn, curls itself into a spiral. 2. The second mode of judging of the completion of the process, is by observing the time when the sirup ceases to moisten the sides of the boiler, and then blowing forcibly into a skimmer which has just been immersed in it—if bubbles escape through the holes of the skimmer which ascend into the air as soap-bubbles do, the liquor is considered to be sufficiently boiled."

When the concentration arrives at this point, the sirup must be taken from the boiler, and poured into large pans, for the purpose of cooling. The pans must be placed in the air, and the sirup occasionally stirred during the process of cooling, which will be completed in about two hours. On examination, the bottom and sides of the pan will be found covered with a thick bed of chrySTALS, having but little consistence; on the surface of the sirup a crust will also be formed. To promote chrySTALLIZATION, or, as it is more properly called, graining, a thin bed of brown sugar is sometimes put upon the bottom of the

cooling, in order to make a nucleus about which the chrystallized matter may gather.

After the sirup is cooled and chrystallized, or grained, all that remains is to separate the sugar from the molasses, and it is fit for domestic consumption or market. To effect this separation, moulds, as they are called, must be prepared in the form of defecating vats, with the lower end drawn to a point, or so near a point as to leave a hole of three fourths of an inch in diameter. These may be made of wood, metal, or earthenware, and their capacity may be regulated according to the convenience of the manufacturer. Those used in the sugar factories in France usually are large enough to contain five or six gallons. They are also used in the refining process. Before using them, if of wood, they must be soaked several hours in water, and dried a short time before they are filled with sirup. Thus prepared, and with a cork in the hole at the point, they must be filled, or nearly filled with chrystalized sirup, and secured in an upright position, over a pan or tub of sufficient size to receive the quantity of molasses it contains. After standing from 12 to 36 hours, according to circumstances, the cork is withdrawn, and the molasses permitted to drain off. It will at first drain off rapidly, but soon cease to flow in any considerable quantity. To hasten its separation from the sugar, which takes place slowly, the mass must be pierced with an iron spear, by thrusting it into the hole at the point, which will give it vent, and cause it to drain off. This operation must be repeated as often as is necessary, and until all the molasses is extracted.

After having remained long enough to have the molasses run off, the sugar is detached from the sides of the mould with a knife; the moulds are set on the floor in a reversed position and left for two or three hours, when, by lifting it from the floor, and giving it a shake, the loaf will separate from the mould by force of its own weight. The head of the loaf will retain a degree of moisture and a portion of molasses, and, consequently, should be cut off, and thrown into the juice intended for the next clarification. The molasses, also, when a sufficient quantity is on hand, should be again concentrated, in order to obtain all the chrystallizable sugar it contains. By the foregoing processes, the beet is converted into brown sugar, the kind which is consumed in the largest quantities in most families. In the manufacture of loaf, or lump, sugar, there is another process, called "refining," but being foreign to our purpose, we omit it.

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### *On the Culture of Cotton.*

FROM THE CULTIVATOR.

J. BUEL, *Dear Sir*,—Having recently become a subscriber to your very valuable publication, the "Cultivator," and deeming it highly incumbent upon each subscriber to contribute his "quota" of agricultural information towards promoting the end of your publication, I send you the following, as the most generally adopted mode of cultivating cotton in North Carolina. The land is "bedded," or broken up as soon after picking out as possible (the earlier the better), with a plough drawn by two horses. The beds are from 3½ to 4 feet wide. After the earth has settled, and become somewhat indurated through the influence of rains and the sun, a double horse-harrow is applied to the



ridges, succeeded immediately by a smaller one, which reduces the land to a perfect state of pulverization. Next follows the "marker," drawn by one horse, which makes a small trench on the middle of the ridge, in which the seed are strewn by hand. The seeds are rubbed, previous to planting, in ashes and water, which process embodies three distinct advantages. 1. It enables each seed to assume a separate position when sown. 2. It acts as a stimulant upon the plan,—and 3d. It checks the ravages of that destructive insect, the "cut-worm." The seeds are covered very lightly, say from 1 to 1½ inches, by means of a small harrow, of 6 or 8 teeth. Next in order, is the process of "shaving," which consists in applying the weeding-hoe to each side of the cotton on the ridge; after which the bar of a single-horse plough is run at such a distance from the cotton as will not disturb its lateral roots, by which, all the grass that is taken from the vicinity of the plant is entirely covered in the middle of the alley or water-furrow. About 8 or 10 days subsequent to this, (the grass being completely dead) a triangular harrow is run upon the list formed by the two furrows thrown from the cotton, and two furrows thrown to the cotton, by means of a small plough. I forgot to state above, that immediately after "shaving and barring," the cotton is chopped through by the weeding-hoe, at intervals of 8 or 10 inches, and the most promising and luxuriant stalks selected, leaving from one to two in a hill. Next follows the "dirtting process," as it is termed, which by some is done with the hand, by others with the hoe. The former mode is too laborious, and far from being the most *effectual* and *expeditious*. When the cotton has attained a considerable height, the bar is run very *shallow*, and the plough is run *deep*, when the mould-board is turned to the cotton, to prevent "*firing*." The cultivation then is perfected, by alternately "*barring*" and turning the mould-board to the cotton, immediately followed by the hoes, for the purpose of more effectually dirtting the cotton, and uncovering those branches which the mould-board may have covered. Some of my neighbours "*top*" their cotton; they think it causes the plant to expand more, and form more pods. I should like to see in your next number, a description of the "*Cultivator*," which you recommend to your readers as entirely superseding the necessity of the plough and hoe in the cultivation of Indian corn, together with a detail of the best method of cultivating that article.

With unfeigned respect, I am yours, AGRICOLA.  
North-Carolina, 1st Nov. 1836.

### Address to Farmers.

[FROM THE FARMER'S CABINET—PHILADELPHIA.]

[We bespeak for the following communication the careful and candid consideration of our readers, as the subject is one of great moment. The author, Mr. Ronaldson, is well known as one of our most respectable and enterprising citizens. He is the same gentleman who succeeded in directing the attention of our citizens to the culture of the beet-root, for the fabrication of sugar; and his object in this enterprise, like that just referred to, is to benefit the community, without any reference to pecuniary gain.]

#### To the Farmers of the United States.

That care and skill have improved fruit trees, vegetables, and our domestic animals, are facts known to all classes of husbandmen; and

the advantages of rearing cattle from the best breeds is now well understood all over America. The advantages that accompany procuring the best grain for seed, is as yet but partially understood, and very little attended to.

Repeatedly sowing some kinds of grain on the same land, is in many cases followed by an evident decline in the quality; still, this, it must be observed, is not a uniform consequence; there are many, and well-authenticated instances where the change to a new soil and climate is accompanied with a deterioration, and in others, as great an improvement has taken place.

As it is known that grains, &c., in some climates and soils degenerate to a minimum, sometimes in quality, in others in quantity, and frequently in both; a practice calculated to remedy these disadvantages is of great importance to the agriculture of the United States. On the present occasion it is our object to point out what may be done here, by showing what is done in other countries, and under circumstances far less favorable to the husbandman, or to the operations of husbandry, than in America. In Scotland, for example, the climate is cold, wet, and stormy; yet, by care and industry, crops are produced, remarkable both for quantity and quality. There, the greatest attention is paid to the changing of seed. The low countries procure their seed potatoes from the high districts at great expense of money and labor. The whole oat-crop of some districts is bought for, and sowed for seed; this is the case with a portion of country called Blainsley, that lays south of Soutria Hill. In no country has the culture of clover been more beneficial, or attended with better success than in Scotland, yet the climate is so unfavorable to the ripening of cloverseed, that nearly the whole has to be procured from England or Holland. The farmers of that country frequently change the wheat seed, and procure the best that is to be had, paying very little respect to price, and the greatest attention to quality.

It would appear that the principle by which the Scotch farmers are guided to the results they obtain, is to select their seed from those districts where it is grown in the greatest perfection, from the climate and soil being best adapted to the plant. Thus they choose seed oats and potatoes of their own growing, these being plants best adapted to mountainous, cool, and moist regions; and clover and wheat seed from England and Holland, which are comparatively low, warm and dry, and better adapted to their production.

It is well known that in America, our oats are not good; they have little kernel or meal: and the quality of our barley is not what it ought to be.

It is to the following circumstance the present address owes its existence.

In the year 1833 a well-informed practical farmer visited Pennsylvania, with the object of seeing as much of our practice of farming, soil, and climate, as a short stay here would permit. On his return to Scotland, he procured and sent to his friends in Philadelphia, some Angus Oats, Hopeton Oats, Barley, Wheat, and Rye-grass; the cask containing the seeds miscarried, and did not arrive here until the fall of 1835.

Some of each kind of these seeds have been sown here; the wheat came up very thin; it is presumed the seed suffered from the long voyage. On the 18th April, 1836, the oats and barley were sown, on rather poor but fresh loam. It is true, the season has been cool, damp,

and favorable to these grains, still, their success has surpassed any thing that could have been calculated on. The barley and both kinds of oats are of superior growth, in strength of stem, as well as thickness on the ground; they would lose nothing in a comparison with the crops of oats or barley of any country, and are likely to suffer loss from excessive growth causing them to lodge. One kind of oats commenced shooting into ear about the 1st of July, and the other about the 10th; the marks which were placed, to distinguish the one from the other, had got displaced, and this accident prevents knowing whether it is the Angus or Hopeton oats that first puts out the ear.

Now let me inquire into the economy of farmers adopting the practice of annually supplying themselves with new seed grain, and found our calculations on a farm where about 20 bushels of oats are sown each year; the farmer of such a piece of land could supply himself with an annual change of his oat-seed in the following manner. It is presumed that each bushel of the imported oats he sows, will produce 10 bushels; then, by annually buying two bushels, their produce would yield the 20 bushels required for sowing on his farm. Suppose the price of the imported oats to be \$1.50 a bushel, the two would cost \$3; and the price of country oats was 50 cents, the two would cost \$1. The expense of changing the seed would be per annum \$2. The estimate is not given as a matter of accuracy, but as a formula by which every one can make his own calculations.

In procuring a change of seed, there are other points necessary to be attended to besides the quality of the grain, and one of these is to guard against bringing with it the weeds incident to the country or fields where it has grown; for want of attention to this, there are farmers who have introduced into their fields, along with the clover they sowed, the narrow leaved plantain, which arrogates to itself a place which would otherwise be occupied by clover, to the detriment of his hay, both in quality and quantity, and that more serious curse, Bensalem clover, or white daisy: all this is the result of their not taking sufficient care in the selection of their clover seed.

In the British Islands, their oats and barley fields at some seasons, are entirely yellow; nothing is to be seen save the bloom of the wild mustard, in some districts called Sheldrieks; and this is not the only one of this class of yellow flowering spring weed; in wheat they have what is here called cockle, the seed of which is detrimental to superfine flour; all these should be guarded against by the European agent, and to prevent mischief, the seed, after it arrives here, should be sifted in a sieve that will separate the weeds from the pure grain, always collecting and burning the obnoxious seeds.

In proof of the sincerity, that the writer entertains a favorable opinion of this system, he will import for the next season's sowing, one hundred bushels of selected barley, one hundred of each variety of oats, already spoken of, and, it being too late for receiving wheat for the ensuing sowing, measures will be taken for bringing to this country wheat for the following year.

Such persons as take an interest in renewing their seed grain, are invited to apply to the subscriber, who will furnish them with any quantity, not less than a bushel. The cost will be governed by the price abroad, and the expense of bringing the articles here. The transaction will be attended with considerable trouble, and the limited extent of the operation will satisfy all who reflect, that there are other motives for undertaking the business than that of making money.

Letters post paid, will be duly attended to, addressed to

JAMES RONALDSON.

No. 200 south Ninth-street, Philadelphia.

P.S. Editors of newspapers who take an interest in the advancement of our agriculture are requested to insert the preceding in their papers.

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### *On the Culture of Tea.*

[FROM THE GENESEE FARMER.]

In a late number of the Chinese Repository is an interesting account of a journey performed by G. I. Gordon, attached to the English factory at Canton, and that indefatigable missionary, Mr. Gutzlaff, to the tea hills in the interior, which produce the celebrated black teas, known in commerce as Ankoy teas. Their journal furnishes some interesting details of Chinese agriculture, and the manner in which they husband all their resources, to meet the wants of their millions of population. The country through which they passed, swarmed with inhabitants, and though what in other countries would be termed second rate land, exhibited the highest degree of cultivation. Rice, the sweet potato, and sugar-cane, were the principal articles of culture; rice, as in all eastern countries, forming the principal article of sustenance. Wheat and corn are scarcely known there, they occupying too much land, in proportion to their productive properties, when compared with rice.

In one part of their journey, the travellers were obliged to ascend a rugged barren mountain; yet even there, there was not a spot, where a vegetable could take root, that was not occupied by at least a dwarf pine, planted for the purpose of yielding firewood, and a kind of turpentine; and wherever a nook presented an opportunity of gaining a few square yards of level country by terracing, no labor seems to have been spared, to redeem such spots for the culture of rice.

On their arrival in the neighborhood where the tea-plant was cultivated, they found that no ground suitable for other purposes was devoted to it. The plant is a small shrub, planted generally in rows about four and a half feet apart, with leaves from three fourths of an inch, to two inches in length, and growing to an average height of three feet, with bushy tops very close. The hills where the tea plants grow, are too high for rice and the cane. On these hills hoar frosts are common during the winter months, and snow falls to the depth of three or four inches. The plant is never injured by the most severe cold experienced there, and thrives from ten to twenty years. The tea-plant has its enemies, among which is a worm which makes its way into the pith, and converts both stem and branches into tubes.

The ground around the plants is kept light and loose by hoeing, and no leaves are taken from them until they are three years old; after that, the leaves are usually gathered four times a year. The cultivation and gathering of the leaves is performed by the families; but the curing of the leaf is an art that requires some skill, and persons are employed for that purpose who are paid at the rate of one dollar a pecul (133½ lbs.) of fresh leaves, which yield one-fifth of their weight of dry tea. The price on the spot for the best qualities, is twenty-three dollars per pecul, or about 17 cents per lb. The process of curing consists in rolling and drying the leaves over a gentle fire, the opera-



tion for the best kinds being repeated seven or eight times. Any desired quantity of seed was offered our travellers; and, indeed, throughout the journey they were hospitably treated, and received every information freely which the natives could give.

That the culture of tea, as an article of profit, could ever enter into competition with cotton, so long as that article is in such demand abroad, is not to be expected; still, as large regions in the southern or middle states are admirably adapted to the culture of tea, it is to be wished that such favorable opportunities for its introduction, and, if possible, naturalization, should not be overlooked. The perfect familiarity of Mr. Gutzlaff with the language, his acquaintance with their customs, his skill in medicine, and the confidence the Chinese themselves feel, that he only wishes their good, have given him facilities for access to the interior of that secluded country, that few have ever enjoyed; and we trust that some of the enterprising shipmasters, who frequent that country, will avail themselves of the opportunity, and be the means of giving us another item in our already extended list of resources.

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### The Western Barrens.

[FROM THE CHICAGO (ILLINOIS) AMERICAN.]

Barrens are a species of country, of a mixed character, uniting forest and prairie. They are covered with scattering oaks, rough and stunted in their appearance, interspersed with patches of hazel, brushwood, and tough grass. They appear to be the result of the contest, which the fire is periodically continuing with the timber. The appearance of this description of country led the early settlers of the State to suppose that the scantiness of timber was owing to the poverty of the soil; and hence the title, thus ignorantly given, and calculated to convey erroneous notions to our eastern farmers, became of universal application to this extensive tract of country. It is ascertained, however, that these *barrens* embrace as productive a soil as can be found in the state—healthy—more rolling than the prairies, and abounding with that important requisite to desirable farms, good springs. The fire visits these barrens in the fall, but owing to the insufficiency of the fuel, is not able to destroy, entirely, the timber. The farmer may settle, without hesitation or fear, in any part of this species of land, where he can find timber sufficient for his present purposes and wants, for the soil is supposed to be better adapted to all the interests of agriculture, and the vicissitudes of the seasons, than the deeper and richer mould of bottom and prairie land. Where the fire is prevented from the ravages, (as it easily can be by the occupant of the soil,) heavy timber springs up with a rapidity which would be incredible to the northern emigrant. High insulated *bluffs*, of a conical form, and exhibiting the appearance of connected ridges, rise up from the bottoms along the rivers which meander and fertilize them; they are from one to three hundred feet in height. *Knobs* of land, stony, and often rocky, at their summits, are found along the rivers, in some sections of the state, separated by deep ravines. The prairies are often intersected by ravines leading down to the streams. Deep sink holes, which serve to drain off the waters, are found in some parts, and prove that the substance is secondary limestone, abounding in subterraneous cavities. Very little that is denominated in the eastern

states *stony ground* is found in this state. There are quarries of stone in the bluffs, in the banks of the streams, and in the ravines. In the vicinity of Juliet, and many other promising villages, an abundance of stone can be procured, admirably adapted to the purposes of building, uniting durability with great beauty and warmth. *Timber*, were it *equally* distributed in this state, would be adequate to the necessities of the settlers. Its apparent scarcity, where the prairie prevails, is not found to be so great an obstacle to settlement as has been generally imagined. Substitutes have been found for many of the purposes to which timber is generally applied: and the rapidity with which prairie, under the hand of care and cultivation, becomes converted into forest of timber, affords a sure guaranty for the future.

The kinds of timber most abundant in the state, are oaks of the various species, black and white walnut, ash of the several varieties, elm, sugar-maple, honey, locust, hackberry, linden, hickory, cotton-wood, pecan, mulberry, buck-eye, sycamore, cherry, box, elder, sassafras, and persimmon. In the southern and eastern parts of the state, yellow poplar and beech may be found. Near the Ohio, are cypress trees, and in several counties, clumps of yellow pine and cedar. On the calumet, near the south end of Lake Michigan, is a forest of small pine. The underwood growth consists principally of redbud, pawpaw, sumach, plum, crab-apple, grape-vine, dog-wood, spice-bush, green-brier, hazel, etc. The trees in this state are very luxuriant in their growth, and are frequently found of a stupendous size, particularly the cotton-wood and sycamore, on the alluvial soil of the rivers.

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### *Raising of Chickens.*

[FROM THE NEW-YORK FARMER.]

Sir,—The subject upon which I am about to write, may excite a smile upon the faces of some, but if I succeed in rendering even a small service to any one, the object will be accomplished. I think I may throw out a few hints that may be useful in increasing the number and quality of an animal that is so universally made to conduce to the luxury of the table, and the proper substance of the human system. In the first place, then, I would advise those interested, to procure for themselves a good breed of fowls. The pair I sent you last fall, I consider nearer to perfection, in all respects, than those of any other breed. I call them the ostrich breed, from their strong resemblance, when about half grown, to that famous bird. They are large, their habits are very domestic, they lay well, set well, hatch well, and nurse well, and their flesh is very delicious. Have a well-sheltered place for them to roost in, with a sufficient number of places for them to lay their eggs. Let your box be about a foot wide, and about fifteen inches high, with partitions about ten inches apart. The box to be enclosed on every side, with the exception of about six inches of the front, and that the upper part; place the box enough against the wall to prevent the depredations of children, &c. The hen is fond of a small aperture to creep into for the purpose of laying. At the proper setting season remove your eggs carefully every night, into a safe place, to prevent their freezing or getting much chilled which will prevent their hatching. No "nest egg" is necessary upon this plan. The nest egg, in my opinion, seldom produces a chicken early in the spring, because of its having generally been chilled.

While the laying business is very brisk, prepare as many setting-boxes as you may think fit. Let them be about eighteen inches square, enclosed on every side, with a loose cover for the top, not so tight as to shut out the air; put hay or straw enough in to form a nest, in which you may place about thirteen eggs; put the hen in the box, and lay on the cover, with a weight sufficient to prevent her from knocking it off. You may confine her, without any injury, for three or four days, at the expiration of which time you may take off the cover, and leave her until she hatches—which, almost every body knows, will be in exactly twenty-one days from the time of commencement. The advantages of the large box are these: It gives room to move round, without breaking the eggs, and the little ones a chance of coming out without the danger of their running away. When hens set on the ground, or in unprotected places, they are subject to be interrupted by animals, and when two or three chicks are strong enough to run, they leave the nest, and the mother, following them, leaves the half-hatched to perish. This is a great loss of time, eggs, and chickens.

As the warm season advances, always endeavour to set three hens at exactly the same time: they will, consequently hatch at the same time, and you can then divide the chickens of the three between two, and they can generally take care of more than they can well hatch, if properly managed.

Make as many movable coops as you think necessary, with a shed roof and slats in front, which place in some place, safe from hogs, in the sun: the sun is very invigorating to young chickens. The hen and chickens should be fed with corn-meal wet with water or milk, three times a day, and watered at least once. The hen should be kept confined in this way, at least for a week, to prevent her from leading them into the wet grass in the morning, which is very prejudicial to their well-being. At the expiration of that time, if the weather is good, you may place a block under one corner of the coop, and let them out; at night they will return, and take possession again, when you should take away the block, and keep them in again until the dew is off the grass. If the weather is unpleasant, keep them in all day.

When the chickens acquire more size and strength, they should be fed on what is called a "chicken feeder," which is a covered enclosure, six or eight feet square, with slats just close enough to admit the chickens, and exclude the older fowls.

Each of my hens, last year, raised to perfection, on an average, at least twenty chickens. They each raised two broods, and several hatched three times.

When the chicks are taken from one hen, and given to another, the one from which they are taken, should be confined for about a week, and then set at liberty, when she will soon commence producing another family.—*Ohio Farmer.*

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### *Agricultural Architecture.*

[FROM THE SILK CULTURIST.]

Though nothing contributes more to the beauty and value of a farm than handsome buildings, yet most farmers are grossly inattentive to their construction, especially dwelling houses. They suppose that comfort and convenience are all to which a farmer should aspire, and consider every thing ornamental as a wasteful expenditure. It is true,

they admire the beautiful houses of the clergyman, the lawyer and the merchant, but think them not adapted to the taste and occupation of the farmer, and consequently, instead of taking them for patterns in building, devise new plans, which, in their opinion, are better suited to their circumstances and condition in life, and which they think are in accordance with a more rigid economy. The result is, the beauty of farms is marred by the erection of building without symmetry or taste—mere piles of lumber and bricks, without form or comeliness, which would puzzle an artist to determine whether they were intended to be burlesques upon civil, military, or naval architecture.

It is a general opinion that an elegant dwelling-house is necessarily an expensive one, and hence most farmers content themselves with convenience, and leave elegance to those they suppose better able to indulge it. That architectural elegance consists more in design than dimensions, is apparent from the fact, that many small modern-built dwelling-houses are far more elegant than larger ones of antiquated style of building, besides being less expensive. The size of the dwelling-house should be regulated by the family and business of the intended occupant; but whether it be large or small, elegance, as well as convenience, should be regarded; and they may be easily combined without subjecting the builder to extra expense. Every person, therefore, intending to build, should not only "first set down and count the cost," but employ a competent scientific and practical architect to make him a plan, and, after it is made, not suffer it to depart from for the gratification of his own whims, or those of his wife. A trifling alteration in the plan of a building will destroy its symmetry, mar its beauty, and make it unsightly to the eye of taste.

Thus far, a handsome dwelling-house may be erected with the same expenditure as a homely one. The subsequent expense will vary, according to the style in which it is finished, and the cost of the labor and materials bestowed upon it. In this respect, also, elegance ought not to be disregarded, and the expenses attending it will be found far less than is ordinarily supposed. Fifty, or, at most, one hundred dollars, expended in ornamental work, will make a vast difference in the appearance of a dwelling house, and, in most cases, would be amply sufficient to make it elegant. There are, in reality, but few things which can be charged to the account of elegance—porticos, window blinds, cornices, painting, &c. &c., are as useful as they are ornamental, and no dwelling-house should be considered finished without them.

The same is true, though in a less degree, with respect to the construction and location of out-houses. These may be planned in such a manner as to add much to the appearance, as well as the convenience of the farm, without additional expense. Much elegance may also be combined with convenience, in the arrangement of gardens, yards, and avenues. Though these, scientifically laid out, and tastefully decorated with shade trees, evergreens, and flowering shrubs, are indispensable to giving the beauty of the buildings its proper effect, yet they require but a very small outlay of money. A little labor, and a few dollars for the purchase of rare plants is all that is required. If, therefore, architectural elegance and rural beauty are attainable at so cheap a rate, should not every farmer regard them in the construction of his buildings, and the laying out of his grounds—and will not the increased value of his farm, besides the gratification of his taste, and the satisfaction of having contributed his mite towards improving the general aspect of the country, afford him an ample indemnity against pecuniary loss?



*American Mechanics and Democracy.*

[FROM THE NEW-YORK EXPRESS.]

Perhaps there is no part of a population so valuable to the community as the Mechanic who thinks and acts for himself. We are sure of this fact, and have always been surprised that a class of our citizens so valuable to the community, and so necessary to the support of the country, should be so indifferent to themselves and their country.

Old Ben Franklin was one of the wisest, shrewdest, and greatest mechanics of the day. His "Poor Richard" will make any poor man rich. What is the secret of his success?—many a mechanic may ask. Ah! that is the thing. When we can all find out this secret, we can all be Franklins, and we can all be rich.

We have often studied the character of this great man, from the time he was sticking types in Boston, to the time he was wandering through the streets of Philadelphia with a loaf of bread under his arm, or sat with kings or queens in Paris, or brought down the lightning from heaven by his kite. The secret of his success, we have thought in part was **INDUSTRY**, which very many have—**FRUGALITY**, a virtue many also have, but above all, he **THOUGHT** and **ACTED** for himself. his head belonged to himself. He was no man's man, but he was Ben Franklin's man. He wore no collar. When he acted with a party, he so acted, because he thought it was right.

'But,' says some one, 'you say industry and frugality are common virtues with mechanics. Why are not all mechanics rich? The reason is, that there are very many who will not think for themselves. In an affair of business, for example, instead of sitting down and making their own calculations, they trust others to sit down and calculate for them. Instead of employing their leisure hours in studying out for themselves, and reading for themselves, how the world is going, they sit down, and listen to others, and take their say so, that is right, and that is wrong.

It is in vain to attempt to disguise that this world is divided into men of two extremes of thinking, with very many men of many minds, forming links between these two extremes. Men who, for popularity's sake, call themselves democrats, as Robespierre did in France, when he was cutting off people's heads by the regiment, till the very streets of Paris were clotted with human gore—such men we say, tell us, that what is called democracy represents one of these classes which they call **THE PEOPLE'S FRIENDS**, and whigism, alias federalism, alias aristocracy, the other class, **THE ENEMIES OF THE PEOPLE**. Now, a mechanic who has his eyes and ears, will not take this upon trust, but will do as old Ben Franklin did, and demand, **is THIS so? Well, is it so?** Let us discuss this question, and think for ourselves as we go.

Generally speaking, a very rich man's son is likely to be less of an aristocrat than a poor man suddenly made rich and prosperous. The reason is, that the rich man's son is accustomed to wealth, and thinks nothing of it, whereas the poor man, suddenly made a rich man, often has his head turned and made dizzy by the very dazzle of his wealth. He can't stand his prosperity, perhaps. Accustomed, for example, for all his life to sleep on a log of a bedstead, or to jog off miles on foot, the moment he gets rich, perhaps, he out-dazzles the greatest dazzlers, and

ottomans alone are good enough for his seat,—the carpets of Turkey for HIM to walk upon, while he sports his equipage out of doors, his servants and his livery, and astonishes the beholders with his magnificence and state. Now, Ben Franklin, in this case, would ask, which is the aristocrat—the rich man's son, or the poor man's son made rich?

Again, Ben Franklin judged people by their acts, and not by their professions. Had he been called upon to ask, which of the two candidates was the democratic candidate, and which was the friend of the people, he would not have looked to the professions of either, but to the ACTS of both. If by democracy is meant, love of our fellow-men, he would have asked, which had shown the greatest forgetfulness of self, and which had done most for his fellow men? Which, in his manners, in his conduct, and his life exhibited the greatest regard for the people, and the people's interests? Old Ben Franklin would never have believed that a man was a democrat, because some one said, "I told you so," but he would have opened his eyes to see, and his ears to hear.

The great obstacle in the way of the advancement of the poor, and of the workingmen of this country, is that they do not always think for themselves, and that they too often suffer others to think for them. But let them remember, that the moment they suffer others to think for them, that very moment they cease to belong to themselves, and belong to him to whom they have entrusted their thinking powers. For what else has God given us our eyes and our ears, but to SEE and HEAR for ourselves? If we trust these eyes and these ears to others, we are slaves, white though we be, and if some southern planter do not own our bodies, some northern Demagogues own more, our bodies and our souls. Above all, then, **THINK FOR YOURSELVES—ACT FOR YOURSELVES.** Wear no man's collar—be no man's and no party's dog. If others choose to bark, and to howl, when leaders pinch them, and tell them so to do, be independent, as the Deity who made you, and think and act for yourself. Newspapers may talk of party allegiance, party collars, 'the usages of party,' 'regular nominations,' and all that rigmarole of party, but an independent man will think and act as he pleases.

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### *Garden Seeds.*

[FROM THE SILK CULTURIST.]

As success in gardening depends much on good seeds, a few hints on raising, gathering, and preserving them, may be of importance to the young and inexperienced gardener. Plants intended for seed, should be carefully cultivated during their whole existence, and especially while their seeds are ripening. They should also be located in such a manner, as that those of the same species cannot intermix, and produce deteriorated varieties. To prevent mixing, they must be set at considerable distances apart, as even Indian corn has been known to mix at the distance of three hundred yards. It is utterly impossible to preserve varieties of cucumbers, melons, squashes, pumpkins, &c., in their purity, if they are permitted to flower, and ripen their seeds in the same garden; the seeds of two varieties of the same species of plants should not, therefore, be attempted to be raised in the same garden, at the same time. It is this disposition to mix and degenerate, that renders it difficult for seedsmen to raise a complete as-

sortment of seeds on their own grounds, unless they are very extensive.

The most luxuriant and perfect plants, and such as arrive at maturity the earliest in the season, should be selected for seed. They should be permitted to remain in the garden until the seed is perfectly ripe; and should then be gathered and cleaned in clear weather. If any moisture remains, they should be exposed to the rays of the sun until they are perfectly dry, and then be put in bags or boxes and secured from the depredations of rats, mice and insects, and the action of severe cold. As a general rule, new seed is to be preferred to old, on account of its germinating quicker, and producing a more vigorous growth; but good seeds, gathered and preserved in the foregoing manner, will retain their vitality as follows:

	YEARS.		YEARS.
Asparagus,	4	Marjoram,	4
Balm,	2	Melon,	8 or 10
Basil,	2 or 3	Mustard,	3 or 4
Beans,	1 or 2	Nasturtium,	2 or 3
Beets,	8 or 10	Onion,	3
Borage,	2	Parsley,	5 or 6
Cabbage,	6 or 8	Parsnip,	1
Carrot,	1 or 2	Pea,	2 or 3
Celery,	6 or 8	Pumpkin,	8 or 10
Corn,	2 or 3	Pepper,	5 or 6
Cress,	2	Raddish,	6 or 8
Cucumber,	8 or 10	Rue,	3
Caraway,	4	Ruta Baga,	4
Fennel,	5	Salsafy,	2
Garlic,	3	Savory,	3 or 4
Leek,	3 or 4	Spinage,	3 or 4
Lettuce,	3 or 4	Squash,	8 or 10
Mangel Wurtzel,	8 or 10	Turnip,	3 or 4

Some gardeners prefer old seeds of cucumbers, melons, squashes, &c. &c. to new, on account of their running less to vines, and producing larger crops of fruit; but on this point we cannot speak experimentally. The vitality of seeds is easily tested, and they ought never to be sown, in any considerable quantity, without it. When divested of their covering, such as will germinate will sink in lukewarm water, while such as have lost their vitality will float on the surface.

### *On the Proper Management of Posts, with reference to their Durability.*

[FROM THE FARMER'S REGISTER.]

Perhaps there is no subject connected with agriculture, on which a greater diversity of opinion prevails, than the question, whether, with reference to their durability, posts should be put into the ground green or seasoned? When I first settled, I took considerable pains to inform myself on this point, by consultation with those, whose experience should constitute them proper fountains of information. The diversity to which I have alluded, impaired greatly the acquisition of decisive results. Mr. Thomas Thweatt, of Dinwiddie, (a gentleman of great judgment and observation on all agricultural subjects,) related to me a circumstance which contributed much to the attainment of my

object. He stated, (if my memory be correct,) that in the erection of his garden, a number of posts, as he supposed, were prepared and suffered to remain until they were thoroughly seasoned. Its completion, however, required one, in addition, which was taken from an adjacent tree, and immediately put in the ground. Seventeen years had elapsed, and every post had rotted down except that one, which remained sound. In the progress of my investigation, another instance was related, in which an entire side of a garden exhibited the same results. My own limited experience furnishes an incident worthy of being mentioned. My garden enclosure was erected of posts while green. Several pieces remained exposed until they were completely seasoned. Out of these a horse-rack was constructed, which was entirely rotted down, while every post in the garden remains firm. From these facts I deduce the belief, that a post planted when green will last longer than one previously seasoned; and for the reason that the operation of seasoning produces cracks in the timber, which, admitting the moisture from the ground, causes its decay. I recollect to have read the account of an experiment, proving, that the inversion of posts from the direction in which they grew, operated beneficially. Two gate posts were hewn from the same tree—one was planted in the manner in which it grew, the other inverted. The former rotted, while the latter was sound. It was accounted for in this way: that nature had formed valves for the ascension of the sap, which allowed the moisture from the ground to penetrate through the same channel; but that the inversion of these valves interposed a barrier to its admission. This theory corroborates the idea previously expressed, that the moisture of the ground, alternately penetrating within the timber, and in droughts, measurably receding, causes its decay. Whether the posts should be cut, while the sap is up or down, I am unable to determine. A writer in some of the numbers of the *American Farmer*, states that oak timber should be cut while the sap is up, because it is glutinous, and forms a cement, or substance which acts as a preservative.

I have ventured to express these hasty and imperfect reflections, with the hope that, although they may not impart any useful information, they may elicit some from others. These are controverted subjects, in which every person who erects a gate or encloses a garden is deeply interested; and their further discussion will be valuable, at least to

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*Yankee Ingenuity.*

[FROM THE POUGHKEEPSIE TELEGRAPH.]

The whole world must, ere long acknowledge the superiority of Yankee ingenuity, and already many portions of it have tacitly made the admission, by the employment of American mechanics in the superintendence of various kinds of mechanical business. Gen. Tallmadge, in a letter from St. Petersburg, remarks, that the foreman of the principal machine factory at Manchester, England is an American, from Providence; and the principal manufacturer employed by the King of Prussia, is a native of Baltimore. Henry Eckford was, for a long time, the master ship-builder for the Sultan of Turkey; and we saw stated a few days since, that several elegant buggies have been exported, per order, to England, from Newark, N. J. Two inventions, which are considered by the English as the greatest improvement of



the age, are the fruits of Yankee ingenuity—the machine for making the weaver's reed, invented by J. A. Wilkinson, of Rhode-Island, and the "self-regulator to the power-loom, invented by A. Stone, of the same state. But, in point of ingenuity, we believe nothing can exceed the stock-machine, invented by General Harvey, of this village, and now in successful operation, in the manufacture of stock frames. Added to this, his machine to manufacture screws; his coining apparatus, and various others of minor importance, exhibit mechanical skill of the highest order. Wherever our ingenuity and enterprise extend into foreign countries, an evidence and conviction of our greatness goes with them; and the non recoiling rifle of young Cochran, made Mahmoud of Turkey exclaim, "If American boys can do this, what cannot their MEN do!"

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*Agriculture.*

[FROM THE NEW-YORK SUN.]

We observe with astonishment and regret, the conclusive evidence which appears in every direction, that the business of Agriculture does not receive the attention due to it in this country, but is treated with absolute neglect, compared with other pursuits. This ought not to be, and the inhabitants of this country will yet learn, that they have committed a gross error by abandoning the cultivation of the soil for less independent and more precarious modes of obtaining a livelihood.

Who has ever heard of such a state of things as now exists here? We have a soil as fertile as any that the sun ever shone upon, a country almost boundless in extent, and so cheap, that any man may purchase a farm with the proceeds of a few months' labor, yet we are actually importing, for consumption, immense quantities of agricultural products from foreign countries! A people, thinly scattered over a land unequalled in fertility, and exhaustless in its resources, are buying their bread, at enormous prices, from countries, so overburthened with inhabitants, that political economists have feared that the earth would fail to produce sufficient to support them. Such an extraordinary and unnatural circumstance should excite attention, and awaken the inquiry as to its cause.

The fault, as we have seen, is not in the soil, nor is the country over-run with inhabitants. It is, therefore, evident, that the cultivation of the soil is neglected, otherwise we should be exporting, instead of importing, agricultural products, but it is easier to show the fact, that agriculture is neglected, than to find a sufficient reason for such neglect. We apprehend, however, that it will be found to spring, in a great measure, from the same causes which have produced much evil in this country, and the bitter fruits of which we are now reaping. The first and chief of these causes, is the inordinate thirst for wealth which pervades every class of society, and induces men to abandon their legitimate business to engage in some wild, hazardous speculation, in the hope of becoming suddenly rich. It is also too often the case that the farmer becomes tired of the moderate and gradual accumulation of property by the products of his land, and leaves the cultivation of it, to engage in the business of commerce or manufactures. He finds out his egregious mistake when it is too late. The property he had accumulated is often squandered and lost, in consequence of his ignorance

of new business, and he again sighs for the cheerful and independent mode of life which he has abandoned, when it is out of his power to resume it. We have in our mind numberless instances of this kind, where industrious and prosperous farmers have been lured to their ruin, by being induced to lay aside the implements of husbandry, and engage in the universal scramble after sudden wealth.

There is another great error prevalent upon this subject, and that is, the business of agriculture is generally looked upon as less respectable than that of commerce, manufactures, or the professions; and wealthy farmers, instead of teaching their sons their own business, most usually transform them into merchants, lawyers, doctors, or domineers. This is all wrong. Agriculture is the very back-bone of all business, the main-spring of all wealth, and should be regarded as a profession of the highest respectability. It gives those engaged in it a feeling of independence, genuine nobleness without ostentation, honor, honesty, and firmness, well calculated to perpetuate the free institutions of our happy country. The truth of the eloquent panegyrics of the ancients upon this employment may be more easily realized here than in any other country upon earth. We confidently hope to see public opinion speedily righting itself upon this subject, and to find people seeking their permanent interests, and advancing the prosperity and glory of our wide domain, by engaging more generally in this healthful, honest and independent business.

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### *Seven Reasons why Agriculture should receive the patronage of Government.*

[FROM THE FARMER AND GARDENER.]

1. *Agriculture feeds all.* Were agriculture to be neglected, population would diminish, because the necessities of life would be wanting. Did it not supply more than is necessary for its own wants, every other art would not only be at a stand, but every science, and every kind of mental improvement, would be neglected. Manufactures and commerce originally owed their existence to agriculture. Agriculture furnishes in a great measure, raw materials and subsistence for the one, and commodities for barter and exchange for the other. In proportion as those raw materials and commodities are multiplied, by the intelligence and industry of the farmer, and the consequent improvement of the soil, in the same proportion are manufactures and commerce benefited—not only in being furnished with more abundant supply, but in the increased demand for their fabrics and merchandize. The more agriculture produces, the more she sells—the more she buys; and the business and comfort of society are mainly influenced and controlled by the result of her labors.

2. *Agriculture directly or indirectly, pays the burthens of our taxes and our tolls,*—which support the government, and sustain our internal improvements; and the more abundant her means, the greater will be her contributions. The farmer who manages his business ignorantly and slothfully, and who produces from it only just enough for the subsistence of his family, pays no tolls on the transit of his produce and but a small tax upon the nominal value of his lands.—Instruct his mind, and awaken him to industry, by the hope of distinction and reward, so that he triples the products of his labor, the value of his lands is increased in a corresponding ratio, his comforts

are multiplied, his mind disenthralled, and two thirds of his products go to augment the business and tolls of canals and roads. If such a change in the situation of one farm, would add one hundred dollars to the wealth, and one dollar to the tolls of the state, what an astonishing aggregate would be produced, both in capital and in revenue, by a similar improvement upon 200,000 farms, the assumed number in the state. The capital would be augmented two millions, and the revenue two hundred and fifty thousand dollars per annum.

3. *Agriculture is the principal source of our wealth.* It furnishes more productive labor, the legitimate source of wealth, than all the other employments in society combined. The more it is enlightened by science, the more abundant will be its products; the more elevated its character, the stronger the incitements to pursue it.—Whatever, therefore, tends to enlighten and increase its labors, must proportionably increase the wealth of the state, and the means for the successful prosecution of the other arts, and the science, now indispensable to their profitable management.

4. *Agriculturists are the guardians of our freedom.* They are the fountains of political power. If the fountains become impure, the stream will be defiled. If the agriculturists is slothful, and ignorant, and poor, he will be spiritless, dependent and servile. If he is enlightened, industrious and in prosperous circumstances, he will be independent in mind, jealous of his rights, and watchful for the public good. His welfare is identified with the welfare of the state.—He is virtually fixed to the soil; and has, therefore, a paramount interest, as well as a giant power, to defend it from the encroachments of foreign or domestic foes. If his country suffers he must suffer; if she prospers, he too may expect to prosper. Hence whatever tends to improve the intellectual condition, of the farmer, and to elevate him above venal temptation, essentially contributes to the good order of society at large, and to the perpetuity of our country's freedom.

5. *Agriculture is the parent of physical and moral health to the state,*—it is the salt which preserves us from moral corruption. Not only are her labors useful in administering to the wants, and in dispensing the blessings of abundance to others, but she is constantly exercising a salutary influence upon the moral and physical health of the state, and in perpetuating the republican habits and good order of society. While rural labor is the great source of physical health and constitutional vigor to our population, it interposes the most formidable barrier to the demoralizing influence of luxury and vice.—We seldom here of civil commotions, of crimes, or of hereditary disease, among those who are steadily engaged in the labors of agriculture. Men who are satisfied with the certain and abundant resources of their own labor and their own farms, are not willing to jeopard their enjoyments, by promoting popular tumult, or tolerating crime. The more we promote the influence of the agriculturist, by developing the power of his mind, and elevating his moral views, the more we shall promote the virtue and happiness of society.

6. *Legislative patronage will increase the products of agriculture,* and consequently advance the prosperity, promote the moral improvement, and elevate the character of the state. Look at the disparity, in the products and profits of labor, on the well managed and ill managed farm— or in the well cultivated and ill cultivated district. The one, we say, nets a profit of twelve or fourteen per cent per annum, or the nominal value of the land,—the other but two or three per cent—and

abundant examples may be furnished of both extremes. The rural improvement of a country indicates, pretty correctly, besides, the intellectual and moral condition of its population. Now if by raising the standard of public instruction, by holding out rewards to successful competitors in improvement, and by establishing schools of practical and scientific agriculture, all of which come within the perview of legislative duties, we could render all our improved lands as productive as those of a like quality, which are well managed, our agricultural products would be quintupled. This we do not expect; but after making due allowance for all drawbacks, it must be apparent to every reflecting mind, that the advantages to the state, from a judicious application of a portion of public money to promote agricultural improvements, would be manifestly great. We have seen, from a combination of local cause, and in a short period, the agriculture of old settled countries, doubled and trebled. General causes, operating upon the whole state, cannot fail of producing results alike favorable.

7. *Agriculture is entitled to special patronage, as a matter of EQUAL JUSTICE, as well as from considerations of sound policy*—because she has had nothing special, while other classes have had much. She shares, in common with all in the advantages of common schools, and public improvements, and she did receive, in 1817, a pittance, a *special* pittance, which she has refunded to the treasury, in the form of revenue, with compound interest. The state may be likened to a large family of boys. Five sixths of these have charge of the farm; others are taught trades and handicrafts; and to those two classes is confided the task of providing for the wants of the family. But, as a necessary appendage to a large family, one son is set apart as a doctor, another as a minister, and a third as a lawyer; and to qualify these the better for their respective duties, it is agreed that a portion of the family funds shall be applied to the establishment and maintainance of a school, for their exclusive benefit. Thus while the farmers and mechanics are getting their trades, by labor, in the field and in the shop, the doctor, the parson and the lawyer are getting their professions in the public school. By and by the working boys discover, that, owing to the rapid improvements of the age, school knowledge is as advantageous to the trades as it is to the professions; that there have been great improvements made abroad in the several arts of labor, and that without a knowledge of these improvements, and of the laws upon which they are based, they cannot successfully compete with their better instructed neighbors. Feeling themselves entitled to the same favor that has been shown to the doctor the parson and the lawyer,—desirous of acquiring this useful knowledge in their business so necessary to the common interest of the family, and influenced by laudable pride to become in fact, what they are in name, on a footing of equality with their already learned brethren,—the working boys now ask the family, to establish for them a school, adapted to their employment now that the affairs of the family are prosperous. We cannot, say they, acquire the desired knowledge in the doctor's school, because it is not taught there; and because, were it taught, we cannot be spared from the farm and shop to go after it. We want a school in which we can practice our hands to useful labor, gain instruction in the principles of our business, and at the same time qualify ourselves for the higher duties of social and public life. Is there any thing unreasonable in this request? Or is there aught in it which a wise and prudent family would not grant with alacrity?



The state has expended about three millions of dollars towards qualifying the doctor, the divine, the lawyer, and the gentleman, to discharge their several duties in society, from which the farmer and mechanic can derive but partial, if any, direct advantage. The plainest principles of justice, which accede to all classes an equal participation in the favors of a free government, as well as provident foresight, require alike some special provision for those who live by the sweat of their brow.

We affect to be above the people of the old continent in all our social and political privileges. To sustain this superiority, we should be above them, too, in our intellectual and moral improvements. But we are not. We are superficial in too many things. We mistake the name, too often, for the substance. We are satisfied with sowing a few seeds at random, upon superficial tillage, leaving the after culture to chance; and the consequence is weeds spring up with luxuriance, and often smother and destroy the plants of usefulness. We have but begun in cultivating the mind, the great lever to the arts, and the refiner of human enjoyments. We do not go far enough to ensure the harvest. In many portions of Europe, the mind is brought into early discipline, carefully prepared, and sown with those seeds which promise the best return to the individual and to the community. Take Prussia for an illustration of this remark. There the government provides seven years instruction for every child in the kingdom, at the public charge when the parent is unable to defray it. And what branches of instruction are there taught? Not merely those elementary studies, as reading, writing and the preliminary rules of arithmetic, which constitute the main studies in our common schools—but the sciences which instruct and dignify the useful arts—chemistry, geology, botany, &c.—geography, history, geometry, drawing and music; the mechanic arts and agriculture. Nor does the Prussian government stop here: It provides the schools with the means of teaching this knowledge efficiently. And the primary, or common schools, are not only provided with books and other ordinary matters, but with a collection of maps and geographical instruments, models of drawing, writing, music, &c., with instruments and collections necessary for studying natural history, and, according to the extent of the system of instruction, with the apparatus necessary for gymnastic exercises, and tools suited to teach the mechanic arts or manufactures in the school. She also attaches to every school in a village, or small town, a kitchen or orchard garden, which is made available for the instruction of the scholars; and to her normal schools, or schools for the education of teachers, a farm, for practical instructions in agriculture. Dr. Chauning, in speaking of the Prussian system of instruction, says it is adapted to a monarchy—to bring the minds of subjects in quiet subjection to the will of the sovereign. So far as we have sketched its feature, it seems as well adapted to a republic as a monarchy. If a king finds it for his interest thus to have all his subjects instructed in the higher, or at least most useful branches of knowledge, of how much greater importance is it, that those who are themselves to share in the sovereignty, to make and execute laws, should have their minds early imbued with useful knowledge. In giving these outlines of common school education in Prussia, we have, with trifling variation, the system in operation in Wurtemberg, Bavaria, and other German states, and which is now being adopted in the

French empire. The education of the great body of the people, with the view of implanting good habits, and fitting them, in school, for the various and important pursuits of life, is an improvement of modern times, and one of great moment in a moral and national point of view. It is particularly adapted to the welfare of a free people.

We want schools of science and practice, where the principles and the practice of the useful arts may be simultaneously taught, and the physical and intellectual powers of our youth fully developed in aid of each other. We want in our common schools, a higher grade of studies, as a necessary foundation for increasing the knowledge and usefulness of our people. We want those stimulants to the development of mind, the germination of latent skill, and the practice of useful industry, which are the sure preludes of national prosperity and greatness. We want, particularly, a school of scientific and practical agriculture, as matter of experiment first; and should it prosper as we think it will, we shall hereafter want other like schools. We have seen the agriculture of England more than doubled in its products, under the vivifying influence of an efficient board of agriculture, patronised and sustained by the government. We have seen Scotland increasing, three or four fold, the productions of her soil, under the active and salutary influence of the very liberal premiums, which have annually for fifty years, been distributed by her agricultural society. We see France, growing wise from the example of her neighbors, establishing national farms, and sustaining her agricultural societies by appropriations from her treasury; and we see the speedy and happy effects of this patronage, in the new impetus which has been given to the beet culture, and to improvements in her agriculture generally. We have seen our sister Massachusetts sustaining her agricultural societies by liberal annual appropriations from her treasury; and when the law making these appropriations had expired, we have seen her renewing it, thus affording the strongest evidence of its wisdom and utility. We wish it was in our power to add, that New York, great as she is in territory, in population, in resources and enterprise, had done something great, or generous, or just, to promote the improvement of her agriculture, the great business of her population. We hope the opportunity will be afforded for some one to do it hereafter.

The means which come legitimately within the purview of legislative duties, for promoting improvements in the productive arts of labor, are—the dissemination, through our common schools, of the elementary principles of natural science, now become indispensable to the successful prosecution of the useful arts;—the patronizing of schools which shall simultaneously teach, practically, at least the great business of agriculture, and the science, which serve to illustrate, enlighten, and render it more useful and profitable to the state;—to disseminate, through common school libraries, standard works upon husbandry and other common arts of labor; and to encourage the formation of county and local associations of farmers, with the view of calling into useful action, by pecuniary and honorary rewards, the latent energies of our rural population.

"The arts," says Sir John Herschell, "cannot be perfected, till their whole process are laid open and their language simplified and rendered universally intelligible. Art is the application of knowledge to a practical end. If the knowledge be merely accumulated experi-

ence, the art is, *empirical*; but if it be experience reasoned upon and brought under general principles, it assumes a higher character, and becomes a *scientific art*. In the progress of mankind from barbarism to civilized life, the arts necessarily precede science. Application comes later; the arts continue slowly progressive, but their realm remains separated from that of science by a wide gulf, which can only be a powerful spring. They form their own language, and their own conventions, which none but artists can understand. The whole tendency of empirical art is to bury itself in technicalities, and to place its pride in particular short cuts and mysteries known to adepts; to surprise and astonish by results, but conceal processes. The character of science is the direct contrary. It delights to lay itself open to inquiry; and is not satisfied with its conclusions till it can make the road to them broad and beaten: and in its applications it preserves the same character; its whole aim being to strip away all technical mystery, to illuminate every dark recess, and to gain free access to all processes, with a view to improve them on rational principles."

The measures we have proposed are not untried experiments, or of doubtful tendency. They have been adopted by governments which we are taught to consider less friendly to, and less interested in, the general diffusion of knowledge, than our own, and the results have justified the experiment. The British government has caused agricultural surveys to be made of every county in the kingdom, and published these surveys, comprising fifty or sixty volumes, for the benefit of her agriculture. The French government has had collected and published, under the supervision of her minister of the interior, the agricultural works of her most enlightened citizens. She is now, through her central agricultural society, giving a new and remarkable impetus to improvement in her agricultural labors. As an evidence of her zeal and liberality, and of her wisdom in calling forth useful competition, we are able to state, from documents in our possession, that she has offered to her farmers, for improvements in the beet culture, and in the domestic fabrication of sugar, alone, bounties to the amount of seven or eight thousand francs, or one thousand to fifteen hundred dollars. These premiums are to be awarded the coming spring. The effect of the competition which these bounties to skill and industry are calculated to excite, cannot fail to be greatly beneficial and abiding. She has in a few years increased the products of sugar from her soil to 80,000,000 pounds; while her arable and stock husbandry have been immensely benefited by the extension of her beet culture; and she is likely successfully to compete, ere long, in our own grain markets.

The scramble for political power having for at least a time abated, and our means of improvement being now ample, the hope has been fondly, though perhaps vainly indulged, that considerations like those we have suggested, would press upon the notice of our statesmen, and induce them to adopt such efficient measures for improving the arts of productive labor, as should command the generous applause of the age, and live in the grateful recollections of posterity.

However apt we may be, in our fervor or frenzy to subserve the interests of *self* or *party*, to forget the obligation—we owe duties to our country—to our *whole* country—and to our God; for the performance of which we *must* be amenable—which are paramount to all others; and the faithful performance of which, while it imparts to life its pu

rest enjoyments, affords the only safe hope of a happy immortality. The evil we do, benefits but for a time; the good we do, benefits for time and eternity.

CULTIVATOR.

### *General Sketches.—New-England Agriculture.*

[FROM THE NEW-YORK FARMER.]

I propose to sketch some very general views of the Agriculture of the Northern and Western parts of the country, which I have had recently the gratification of visiting. With much of New-England, I have been long acquainted; and this season has afforded me the opportunity of seeing some of the Western parts of New-York, the North-Western and central parts of Pennsylvania, and parts of Michigan, and Ohio, not under all the advantages, which I could have desired; but with as many as usually fall to the lot of travellers in their transit over the country, by the usual public conveyances.

There is a strong impression prevailing, and not without plausible reasons, that the Agriculture of New-England is on the decline; I do not mean in respect to the character, but the extent of the cultivation. Much less land in proportion to the population is under cultivation than was under cultivation twenty years ago; though in respect to the modes of cultivation, and the utensils employed, especially the plough, great improvements have been made. The amount of crops, from the same extent of land, has been greatly increased, and they are more carefully husbanded than formally. Yet it is a discreditable fact, that New-England is dependant upon other parts of the country for the common necessities of life; and has little to export, excepting perhaps a small amount of beef; and the amount of this article, which New-England exports, does not exceed that, which is brought here alive from other parts of the country.

Maine, with an admirable wheat soil in many parts, grows comparatively little; and wheat flour with the Rochester, N. Y. brand upon it, is to be found far in the interior, a hundred miles, it may be from the sea coast. Little Indian corn is produced, and small quantities of rye. Oats are raised in considerable amount; but not more than is demanded for home consumption. Excellent potatoes are produced; and of these as well as of hay some are sent to the capital of New-England, and there is an occasional shipment to the Southern cities. A good many cattle are driven from Maine to Brighton and likewise into the British provinces; and, as grass fed cattle, they are of a good description; but agriculture in Maine, though the State, notwithstanding its climate, possesses in this respect great advantages cannot be set down as a primary interest of the State. The fisheries, and especially the lumber business, are the great objects of pursuit.

New-Hampshire is even in this matter, behind Maine, and this from the natural condition of the soil. To a stranger unacquainted with the hardihood and spirit of the people, it is matter of difficult solution how the inhabitants of this State are sustained. There are it is true, some sunny spots. Some extremely well managed and beautiful farms are to be met with in Greenland near Portsmouth. There is some good cultivation near Exeter and in Salisbury on the Merrimack. There is excellent, I may justly call it, pattern farming among the Shakers at Canterbury and Endfield, where all that persevering industry and untiring labor, applied with skill and judgment



can accomplish, seems to have been done. There is excellent farming in that part of New-Hampshire, which lies upon Connecticut river; at Walpole, Charlesstown, Claremont, Lebanon, Haverhill, and Lancaster. But a considerable portion of this State is doomed to perpetual unfruitfulness; is covered with mountains of granite, which defy all cultivation, and subject to late vegetation in the Spring and early Autumnal frosts, discouraging to the enterprize and often fatal to the labors of the husbandman. Indian corn is in most parts of the state a precarious crop. Wheat, in those parts of the State where it is at all cultivated, has for three or four years, been much cut off by the grain worm. Rye is in no part of New-England a large crop; and this too, has suffered severely from the same pest. Some small amount of cattle are raised, but the severity and length of the winters make this an expensive process. On some of the Connecticut river lands the crops of oats have been abundant, in some instances rising to ninety bushels to the acre; but nothing like this is to be generally calculated upon and hardly an approach to the necessary supply of bread stuff is at any time produced in the State. There are some valuable intervale lands near the head waters of the Saco, which present favorable examples of good cultivation; but they are quite limited. Considerable portions of the State are well adapted to the growth of wool; and at present New-Hampshire may boast of some as well managed flocks, and the production of some as fine wool, as any part of the world can furnish.

Vermont is, undoubtedly, the best as it is the most exclusively Agricultural State in New-England. The Indian corn crop in Vermont is, however, a very precarious crop on account of the climate; and it produces at present, comparatively little wheat. Wheat was formerly cultivated in Vermont with much success, but for various reasons the cultivation for a few years past has fallen off. Wool is now the great object of attention, and the sheep husbandry is pursued with eminent skill and advantage. Vermont likewise may boast of some of the finest dairies in the country; and a large amount of butter and cheese are sent out of the State. The town of Barnet, on the banks of the Connecticut, has been long and deservedly celebrated for its careful cultivation and excellent dairy produce. The Agriculture of the towns on the Western side of the mountains, and on the lake shore is very superior.

The Agriculture of Massachusetts, is, with few exceptions, in a comparatively humble state. Of bread stuff, it produces but a small part of its necessary supply. Of wheat, a very small amount is raised. Of rye, much more than of wheat, but the amount is not large. Indian corn is more largely cultivated, but the farmers, who produce more than five hundred bushels per year, are a small number. Barley is cultivated to some extent in some parts of the State; in others the cultivation has been abandoned on account of the grain worm, believed to be the same by which the wheat has been cut off, but this fact is not as yet ascertained. Oats are a small crop, and great quantities of horse feed, oats, corn, and hay are imported into the sea ports and their vicinity, a considerable amount of broom corn is raised; and the brush is manufactured and sent into different parts of the Union; and the hops grown in this State, Vermont, and New-Hampshire, form in some years a notable article for exportation. Considerable beef is fattened in Massachusetts; and Worcester and Berkshire counties especially, are extensively engaged in the busi-

ness of dairying. A large amount of wool, and some of the finest qualities are grown in this State. The culture of the mulberry and the feeding of silkworms are beginning to be objects of attention. Some hemp and tobacco are raised, but the cultivation is quite limited. Massachusetts however, though highly spirited, enterprising and liberal in her agricultural improvements by means of well managed societies, liberal donations from the State, and the disinterested efforts of many eminent individuals, has comparatively little agricultural wealth; the farms are generally small, and in many cases cultivated as an appendage to a trade, profession, or some commercial pursuit. Rhode-Island is essentially a manufacturing and commercial community. With the exception of a few favored spots, the soil is sterile and hard of cultivation. The Island itself, from which the State derives its name, is singularly beautiful in its position and aspect, in most cases, of a strong and productive soil, and having singular advantages for obtaining manure on account of its proximity to the sea. Much sea grass, rock weed, and kelp are obtained, and in some places fish, the munhaden, which are taken in great abundance, are freely and successfully used. With the exception however, of the product of potatoes, and especially of onions, which it grows to a large extent, the State has no agricultural produce to export; and is almost wholly dependant on other places for its supply of bread.

Connecticut likewise is a manufacturing State; and Agriculture scarcely exists as an exclusive profession. Some parts of Connecticut have been long remarked for the extensive cultivation of onions, and a considerable amount of wool and tobacco is raised in the State, but its agricultural products are by no means equal to its wants. Connecticut has some large, and is full of small manufacturing establishments; and no part of the United States has a greater appearance of neatness, comfort, and good economy. Its manufactured articles are found in all parts of the Union.

It is sometimes asked how, with a soil and climate not very propitious, the Yankees live, and live in comfort; and if they do not acquire large and overgrown fortunes, yet present more than a fair proportion of examples of humble competence, and as much independence as usually falls to the human condition? The answer may be comprehended in three words, industry, enterprise, and frugality. Climate and soil may be against them, but the condition in which Providence has thrown them, contributes to nourish a spirit of self-dependence, and to form a hardihood of character which is the foundation of their success. Their enterprise carries them into all parts of the country, and the world; and if the usual traits of the Yankee character go with them, their enterprise seldom disappoint their calculations.

I trust it was not mere prejudice, for of that I should feel quite ashamed; that in travelling through the new parts of the country, I persuaded myself that I could, in most cases, point out a Yankee settlement or homestead, without inquiry. In several instances, where I attempted the experiment, the inquiry confirmed my conjectures. There was a certain air of carefulness about the house and out buildings, which distinguished them from most others. I am far from thinking their ways are always best; and as it respects agriculture, they are far behind the Pennsylvania Farmers; but in the capacity of "getting along" on small means, and with honor, comfort, and independence, no people surpass them.

The Yankee, too has an officiousness in other men's matters, which if it has evils, as it is sometimes complained of, it is not without its advantages. He no sooner plants himself in any situation, than he has a "notion" that the community would be better for good roads, secure bridges, a school house, an academy, and a meeting house; and these matters, in general standing in pretty close connection, usually, though silently, announce, who presides over the municipality. The Yankees have a propensity too to have their houses painted, their yards neatly secured, their gates on the hinges and shut, and the pigs kept out of the hall and the front parlor.

This appearance of neatness, care, frugality, and thrift, indicates generally the residence of a Yankee settler; and leads us back to the circumstances under which such a character is usually formed.

With a hard and unpropitious soil, a severe climate, and a population which, if confined to its own resources, would press sorely upon its means of subsistence, he is compelled to labor and exertion, that he may live; obliged to gather up the fragments that remain, so that nothing shall be lost, he is trained in habits of extreme frugality; and his invention is continually toned and stimulated by the great spur of necessity, and a spirit of enterprise aroused and cherished, that he may increase his resources. When the Yankee emigrant carries these habits with him to his new place of residence among the fertile lands of the West, success and wealth are certain; but it too often happens, that when he finds himself in a situation where such constant and strenuous exertions are not required, and he discovers that even moderate exertion is most amply rewarded, far beyond his experience and even his imagination, the love of ease, almost an essential element in the human constitution, prevail over his early habits of industry; abundance begets extravagance and waste; he sinks into the negligent habits of those around him; and stops short in the very midst of improvement.

H. C.

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### *Irrigation in India.*

[FROM THE AMERICAN FARMER.]

*Mr. Hitchcock*,—Amongst my memoranda I find two notices, which relate to two of the greatest works in India, formed for the purpose of irrigation. If there is one circumstance more than another that contributed to the wonderful wealth of that country, it was this feature in its agriculture.

People accustomed to northern agriculture are not able to appreciate the wonder-working effects of this mode of multiplying the products of the earth. India is rapidly declining in civilization, and the memory of these works must soon perish. Although America is not sufficiently populous to undertake such, its march in power, and the rapidity with which it multiplies mankind and wealth, leads one to imagine that it will soon be in a condition to imitate every thing that the ancients have done for the welfare of mankind. One cannot help feeling great mortification that these works have been performed by a people which we have been in the habit of considering barbarous, while the more enlightened governments of modern times have allowed them to decay.

"The following anecdote does honor to the beneficent spirit of British sway. Having stated that the Persian governor of Khanhadar,

named Ali Murdan Khan, amassed a fortune so immense that it was supposed he possessed the philosopher's stone; Col. Fitzclarence\* presumes that his wealth was accumulated by the formation of a canal, not for navigation, but for irrigating a sterile tract of ground between Paniput and Delhi.

"This noble canal was about one hundred miles from north to south; the water which flowed through it being taken from the Jumna, ninety miles above the Delhi, and rejoining that river nine miles below the city. The natives call it Nehur Behisht, or the river of Paradise; sometimes the sea of fertility. The revenue of the country through which it flowed was fourteen lacs, but having been neglected and choked up for one hundred years, by the political convulsions so prevalent in this region, after the death of Aurungzebe, it does not now amount to more than one lac. Beyond its effects in Agriculture, it was of extraordinary consequence to the health of the inhabitants of Delhi. The water of Jumna, and of the wells which they are now obliged to drink, is so much impregnated with natron, otherwise called soda, as to prove at times very injurious. The point of the river from which the canal is taken, is a great distance from that portion of the country in which the natron is so abundant, and there was a cut made from it to supply the city with wholesome water. There could not, therefore, be an act of more true beneficence than the restoration of this canal; and so it appeared to the present governor-general, who decided on the undertaking: and the work is now in actual operation, under the superintendence and direction of Lieutenant Rodney Blane, of the Bengal engineers, whom Lord Hastings selected for this duty, on account of the character he had acquired in the scientific pursuits of his profession. There is a fair prospect that the expense of this work will be compensated many fold, not only by the general improvement, but by the tolls taken for water which passes by sluices in the banks of the canal into innumerable channels to water the country on both sides, which will bring back the population and restore fertility to considerably above a million of acres."

The following is from Elphinston's Account of the Kingdom of Caubul:

"I have now enumerated all the products of husbandry in Afghanistan, of which I have information, but it is certain that I have made omissions, and it is by no means improbable that I may have overlooked some very common objects of cultivation. I shall now endeavor to explain the system of farming, by which the crops are raised; but the great importance of water to success in tillage, renders it necessary that I should first explain how that is obtained.

"The most general mode of irrigation is from streams; the water of which is sometimes merely turned upon the fields, but oftener is carried to them by little canals. It is diverted into those channels by dams, which, in small rivulets, cross the bed, and are swept away in the season when the water rises. In large rivers, a partial embankment is made on one side, which extends for a certain distance into the current, and which, though it does not entirely interrupt the stream, yet forces a part of it into the canal. From the canal, smaller water-courses are drawn off to the fields, which are bounded by little banks raised on purpose to retain the water.

"The next contrivance for obtaining water is the sort of conduit which is called a cauraiz or cahreez." It is known by the same name

\* See his Journal of a route across India.



in Persia; but is there more frequently called a kannaut. It is thus made: The spot where the water is to issue, must always be at the foot of a slope extending to a hill; and the ground must be examined to ascertain whether there are springs, and in what direction they lie. When the spot is fixed, a very shallow well is sunk, and another of greater depth is made at some distance up the slope. A succession of wells is made in this manner, and connected by a subterraneous passage from well to well. The wells increase in depth as the ground ascends; but are so managed, that the passage which connects them has a declivity towards the plain. Many springs are discovered during this process, but the workman stops them up, that they may not interrupt his operations, until he has finished the last well, when he opens the springs; and the water rushes through the channel, rises in the wells to the height of its source, and is poured out from the lowest into a water-course, which conducts it over the fields. When the cauraiz is once completed, the wells are of no further use, except to allow a man to descend occasionally to clear out the channel. The distance between the wells varies from ten yards to one hundred. It is usually about fifty. The dimensions of the channel are generally no more than are necessary to allow the maker to work, but some are much larger. I have heard of a cauraiz near Subsewaur, in Persian Khorassaun, through which a horseman might ride with his lance over his shoulder. The number of wells, and consequently, the length of the cauraiz, depend on the number of springs met with, as the chain is generally continued, either till water enough has been obtained, or till the wells become so deep as to render it inconvenient to proceed. I have heard of various lengths, from two miles to thirty-six, but I should suppose the usual length was under the lowest of those measures.

"It may be supposed that the expense of so laborious a structure must be great, but the rich are fond of laying out their money on those means of bringing waste land into cultivation, and it is by no means uncommon for the poor to associate to make a cauraiz, and to divide the land which it irrigates among them.

"Cauraizes are very common in all the west of the country, and their numbers are on the increase. I know but of one on the east of the range of Solimaun, which is at Tuttore in Damaun. They are in use over all Persia, as they have been in Toorkistaun, but they are now neglected in the latter country. Even their name is unknown in India."

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## PART III.

## MISCELLANEOUS INTELLIGENCE.

**The Public Lands.**—The following is the amount of moneys received for sales of public lands, (as appears by a document sent to Congress), at the Land Offices in the States and Territories, within the year 1836, so far as the returns have been received :

Ohio, -	.	.	.	.	.	\$1,653,455	26
Indiana, .	.	.	.	.	.	4,007,966	80
Illinois, .	.	.	.	.	.	3,863,867	87
Missouri, .	.	.	.	.	.	1,971,985	29
Alabama, .	.	.	.	.	.	2,093,526	03
Mississippi, .	.	.	.	.	.	2,323,167	43
Louisiana, .	.	.	.	.	.	1,063,632	67
Michigan, .	.	.	.	.	.	5,053,611	52
Arkansas, .	.	.	.	.	.	1,124,358	43
Florida, .	.	.	.	.	.	62,154	79
Wisconsin, .	.	.	.	.	.	755,466	03
Total, -	.	.	.	.	.	\$23,983,192	18

**Cotton crops in Texas.**—We have information from a gentleman of this State, who was in Texas a few weeks ago, that he gathered from plantations on the Colorado, where not a blow had been struck this year by the hoe or plough, and where not a single seed had been thrown into the ground, cotton, in the proportion of from 1,600 to 2,000 pounds to the acre. The seed had taken from what remained on the ground, of last year's crop, and was entirely spontaneous, having had no care during the progress of its growth. The same gentleman saw gathered from cultivated ground, on the Caney, 4,100 pounds to the acre. The cotton of Texas is unsurpassed.—*Natchez Herald*.

**Rice.**—A calculating contemporary says that Rice is always one of the cheapest articles of food, and now it is no higher than usual, notwithstanding flour is nearly double its common price. Nothing is so cheap in the present state of prices as rice, and nothing is more healthy or more palatable.

**Coffee.**—The annual table of exports, from the ports of Havana and Matanzas, exhibit the curious fact, that in the last three years, the quantity of coffee shipped to the United States, exceeded the whole quantity shipped to Europe, by 4,076,000 lbs. The export to the United States, during these three years was, 40,900,000 lbs. To all Europe, 35,824,000 lbs.

**Compost.**—Mixing farm-yard dung, in a state of fermentation, with earth, in which there is much inert vegetable matter, as the banks of old ditches, or what is collected from the sides of lanes, &c. [or from marshes and swamps] will bring this inert dead matter, consisting of the roots of decayed grasses and other plants, into a state putridity and solubility, and prepare it for nourishing the crops of plants it may be applied to, in the very manner it acts on peat. Dung, however, mixed with earth, taken from rich arable fields which have been long manured and cultivated, can have no effect as manure to other land that the same dung and earth would not produce applied separately; because there is generally no inert matter in this description of earth to be rendered soluble.—*Loudon*. Mr. Loudon in the last part of the sentence, must allude to *fermented* manure—as the earth, in a compost of *unfermented* manure, will become enriched by the grasses, if not the liquids, given off by the fermenting mass. Hence one advantage of covering *unfermented* manure heaps with earth. The compost, to be sure, is easiest made in the soil, and in the field.—*Cultivator*.

**Rail-road Iron.**—The iron that will be required for rails, chairs, and carriages, and other works for the roads for which bills were obtained during the last session of Parliament, will amount to at least 220,000 tons, and for bills previously obtained, 70,000 tons, making a total of 290,000 tons, which will probably be in requisition for the next four years. With respect to the United States' rail-roads, we find by the American Rail-road Journal, that the extent, either actually under contract, or in progress of being surveyed, amounts to more than three thousand miles. To lay a double line this distance will take 750,000 tons of iron.—*London Ministerial Journal.*

**British Hardware.**—It appears from Parliamentary returns, that the quantity of foreign iron imported into the United Kingdom in 1835, amounted to upwards of 21,150 tons, while the amount of British bar iron exported was 94,383 tons, and of other kinds of iron, an amount which made the grand total 194,500 tons. A document from the custom-house, entitled a "Return of British hardware and cutlery exported from the United Kingdom, in the year 1835," makes the total amount 20,197 tons, the value of which was £1,833,042. Of this amount, 11,062 tons, value £978,491 was sent to the United States. The whole amount for 1835 was an increase of 23 per cent. on that of the preceding year. Since 1820 the exports of hardware and cutlery have doubled in value. The exports of every description of hardware, with iron and steel, wrought and unwrought, amounted in value to £3,789,206, in 1836; and last year to £6,154,625.—*Ibid.*

**Light Lace Veils.**—Mr. Babbage gives the following account of the lace made by the *phalena pandilla*, a caterpillar. The invention is by a gentleman of Munich. He makes a paste of the leaves of the plant which is the usual food of the species of caterpillar he employs, and spreads it thinly over a stone, or other flat substance; then, with a camel-hair pencil, dipped in olive oil, he draws upon the coating of paste, the pattern he wishes the insects to leave open. The stone being placed in an inclined position, a species of caterpillar which spins a strong web is laid at the bottom, and the insects commencing from that point, cut and spin their way up to the top, carefully avoiding any part touched by the oil, but devouring all the rest of the plant. These veils have not a great deal of strength, but they are surprisingly light. One of them, measuring twenty-six inches and a half by seventeen inches, weighed only 1.51 grain; a degree of lightness which will appear more strongly by contrast with other fabrics. One square yard of the substance of which these veils are made weighs 4 3-4 grains, whilst one square yard of silk gauze weighs 137 grains, and one square yard of the finest patent net weighs 622 1-2 grains.—*Ibid.*

**Liverpool and Manchester Railway.**—The company opened their new tunnel, at the entrance of the railway at Liverpool, to the public on Monday last. The tunnel is a mile and one third in length, it is twenty-one feet high, and the span of the arch is twenty-five feet. The tunnel, from one end to the other, is cut out of the solid rock, which, in some places rises as high as the spring of the arch. The crown of the arch is composed of very strong brick work. The cost of this laborious undertaking amounted to £150,000. It will be attended with great convenience to the public, as the former station was about two miles from Liverpool. It occupies about six minutes for a full train to pass through the tunnel.—*Ibid.*

**An International Railway Company** has been provisionally formed, for connecting London with Brussels and Paris by rail-roads, via Dover and Calais, with various branches. This measure appears to receive the sanction of all the governments concerned. The capital is estimated at £4,500,000, to be raised in England, France, and Belgium. The greater part of the surveys have been already made.—*Abstract, ibid.*

**Tea-pots made by Steam.**—Britannia metal tea-pots are now made by steam; the round bodies are spun, and the wooden handles and knobs are cut up by powerful steam-engines. A good workman can spin twenty-dozen of pot-bodies in a day.—*Ibid.*

**Life in New-York.**—It is easier, says the New-York American, to write about living in this city, than to find the means of living. Rents have universally gone up from 30 to 50 per cent. Flour is at \$15 per barrel, and the prices at market are as follows: beef, 12 1-2 to 15 cents per lb.; corned beef, 10 cents; mutton, 17 to 19 cents; veal, 18 cents; turkey, 28 cents per lb., equal to from \$2 to \$3 apiece; a goose, \$2; a pair of chickens, \$2.

**Domestic Medicine.**—The castors on a dinner table, are said, by a late London work, to be a kind of medicine chest containing drugs of great virtues. 1. Salt.—This is a decided cathartic in the dose of half an ounce. It is also a vermifuge in large doses. Criminals in Holland were formally sentenced to live without salt, and became terribly afflicted with worms. 2. Vinegar.—This is refrigerent and diaphoretic, and applied externally, is moderately stimulant. If an overdose of soda has been taken, or if any other alkali, it is a certain antidote. 3. Mustard.—Mustard emetic is said to be infallible in the cholera; a mustard poultice is almost equal so a blister plaster. 4. Olive Oil.—This says the dispensaries, is "demulcent, relaxent and laxative." It is an antidote against acrid poisons, and seems to be obnoxious to worms, killing them it is supposed, by stopping some of their breathing holes. 5. Pepper.—This relieves diarrhoea and the relaxed sore throat. Peperin, the alcoholoid extract from the peper, has cured the ague in the hands of Dr. Meli and others.—*New-England Farmer.*

**To prevent Ink from becoming mouldy.**—The London Magazine gives the following receipt for preventing ink becoming mouldy. Add to each pint bottle of writing ink, five drops of Kreosote. It gives the ink a slight odor of smoked meat, which is by no means disagreeable, and effectually obviates its tendency to become musty. Kreosote may be purchased of the apothecaries.

**Lorenzo Dow.**—Lorenzo Dow was an oddity of the oddest kind. The best anecdote of him is, that being one evening at a hotel, kept by one Bush, in Delhi, New-York, the residence of the celebrated General Root, he was importuned by the latter gentleman, in presence of the landlord, to describe Heaven. "You say a great deal about that place," said the General, "tell us how it looks." Lorenzo turned his grave face, and long, waving beard, towards Messrs. Root and Bush, and then replied, with imperturbable gravity, "Heaven, friends, is a vast extent of smooth and rich territory: there is not a *root* nor a *bush* in it, and there never will be."

**Punctuality.**—A punctual man is very rarely a poor man, and never a man of doubtful credit. His small accounts are frequently settled, and he never meets with difficulty in raising money to pay large demands. Small debts neglected, ruin credit, and when a man has lost that, he will find himself at the bottom of a hill, up which he cannot ascend.

**A Rat Trap.**—The Richmond Whig describes a rat-trap, which seems really curious, from the novelty of the principle applied. It is nothing more than a box faced internally with looking-glasses coming down to the level of its floor, and with an opening for the rats to enter, prepared with a door to close upon them when the trappers think proper. Its success is founded upon the gregarious character of the rat. When he enters, and sees his form multiplied by the looking-glasses, he conceives himself surrounded by his species, and remains, delighted with his company. It is even said, that the first who makes the discovery, will go forth and assemble the whole household to witness it. Be this as it may, it is stated, the success of the invention, which was made accidentally, has been wonderful,—completely clearing out those noxious vermin, wherever it was tried. If such be the fact, it is, in a small way, a most useful discovery, though we should think, as it can only be used in daylight, its practicability would be doubtful.—*Metropolitan.*

**A Persevering Student.**—A small lad stepped into a bookstore, and inquired the price of "Webster's Spelling-book." Being told that they were one shilling apiece, and being possessed of only nine cents in the world, he was entirely non-plused. At length an idea seemed to have struck him. Says he, "Mister, can't you find one that is torn, that you will let me have for nine cents?" The book-merchant looked in vain. The boy was dispirited. At length another idea seemed to have struck him. Says he, "please, mister, can't you tear one?"

We predict, that if this *small lad* is only properly educated, he will become something. No obstacles will retard him; he will tear them *all* away. Ed.

**Hogs.**—Give such hogs as you have in your pen, once a week, a few shovels full of charcoal, or pieces of rotten wood.

"Uncle John," said a little urchin to an old gentleman, who was sitting with his head towards the fire, "why are you like an Indian making his house? D'ye give it up. Because you are making your *wig warm*,"—(wigwam.)